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In the Supreme Court

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United States

OCTOBER TERM, 1994

R. A. HILDEBRAND and
DOROTHY A. HILDEBRAND WAHL,
Petitioners,
VS.
COMMISSIONER OF INTERNAL REVENUE,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

APPENDIX TO PETITION FOR A WRIT OF CERTIORARI

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APPENDIX

99 T. C. No. 7

UNITED STATES TAX COURT

GARY E. KRAUSE, TAX MATTERS PARTNER, BARTON ENHANCED OIL PRODUCTION INCOME FUND, Petitioner v. COMMISSIONER OF INTERNAL REVENUE, Respondent

R.A. HILDEBRAND AND DOROTHY A. HILDEBRAND WAHL, Petitioners v. COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket Nos. 16425-86, 33231-86. Filed July 29, 1992.

Petitioners invested in limited partnerships relating to, among other things, enhanced oil recovery technology. Held, on the primary issues: (1) Activities of the partnerships were not engaged in with actual and honest profit objectives, and (2) debt obligations of the partnerships were not genuine.

Kenneth M. Barish, for petitioner at docket No. 16425-86.

Jeffrey P. Berg, for petitioners at docket No. 33231-86.

Stephen M. Miller, Marion S. Friedman, and Elizabeth Girafalco Chirich, for respondent.

SWIFT, Judge: At docket No. 33231-86, with respect to petitioners Dorothy A. Hildebrand Wahl and R.A. Hildebrand, respondent determined deficiencies in Federal income tax, increased interest, and additions to tax for 1980, 1981, and 1982, as follows:

[SEE TABLE ONE]

At docket No. 16425-86, with respect to Barton Enhanced Oil Production Income Fund, a Kansas limited partnership, and

petitioner Gary E. Krause as tax matters partner, and by notice of final partnership administrative adjustment (FPAA), respondent disallowed Barton's ordinary losses for 1982 and 1983 in the respective amounts of $504,972 and $500,341.

Respondent also determined increased interest and additions to tax under sections 6621(c),[1] 6659, and 6661 with respect to petitioner Gary E. Krause's 1982 and 1983 individual Federal income tax liabilities.

These consolidated cases are test cases for over 2,000 related cases and for a number of related TEFRA partnerships. Alleged total tax

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[1]Unless otherwise indicated, all section references are to the Internal Revenue Code in effect for the years in issue, and all Rule references are to the Tax Court Rules of Practice and Procedure.

deficiencies at issue in connection with this group of related cases and TEFRA partnerships are in excess of $2 billion.

On May 11, 1989, prior to trial, we issued an opinion in these consolidated cases with respect to the parties' cross motions for partial summary judgment which decided a number of legal issues. See Krause v. Commissioner, 92 T.C. 1003 (1989).

The particular limited partnerships that are involved in these test cases (namely, Technology Oil and Gas Associates 1980 (Technology-1980) and Barton Enhanced Oil Production Income Fund (Barton)) were part of two groups of limited partnerships that are referred to in this opinion at various times as the "Manhattan Partnerships", the "Wichita Partnerships", and occasionally as "the

partnerships". The partnerships had the stated general objective of, among other things, investing in enhanced oil recovery (EOR) technology for the recovery of oil and natural gas.

Respondent disallowed substantial losses claimed by the limited partners of the partnerships for 1980 and 1981, and claimed by the partnerships for 1982 and 1983. These test cases raise the following primary issues: (1) Whether the investments in and the activities of the partnerships were entered into and engaged in with actual and honest profit objectives, and (2) whether the stated debt obligations of the partnerships constituted genuine debt obligations, or whether they constituted contingent, sham debt obligations, lacking in economic substance.

Resolution of the issues in these cases is complicated by the extensive record. Trial of these cases lasted 15 weeks. The trial transcript consists of 8,361 pages. Over 1,500 multi-page exhibits were admitted into evidence, and a total of 46 fact witnesses and 28 expert witnesses testified.

FINDINGS OF FACT

Some of the relevant facts were stipulated and are so found.

Petitioner R.A. Hildebrand (Hildebrand) resided in Denver, Colorado, and petitioner Dorothy A. Hildebrand Wahl (Wahl) resided in Lakewood, Colorado, at the time their joint petition was filed. Barton's principal place of business was in Wichita, Kansas, at the time the petition was filed.

Throughout the mid to late 1970s and early 1980s, world oil markets were destabilized by war in the Middle East, by the Iranian revolution, by production and export quotas of oil exporting countries, and by other actions of the Organization of Petroleum Exporting Countries (OPEC). During these years, certain segments of the public, of the oil industry, and of governmental organizations responsible for energy policy reflected a certain hysteria about the worldwide energy crisis and about oil prices.

From 1978 to 1979, the average domestic crude oil price fluctuated from $12.70 per barrel to $34.35 per barrel and peaked in March of 1981 at $34.70 per barrel. In August of 1980, spot oil prices for Saudi light crude oil reached

approximately $46 per barrel, and as of the end of 1980, the price of Saudi light crude oil was $38 per barrel.

A 1980 report of the U.S. Department of Energy (DOE) and various studies published by oil industry representatives indicated that oil prices by 1990 could go as high as $123 per barrel. The table below indicates the mid-level crude oil price projections for 1980 to 1995 that were set forth in the 1980 DOE report, in 1979 dollars and in projected inflated dollars, as follows:

[SEE TABLE TWO]

In the late 1970s, as a result of the energy crisis of the 1970s, the Carter Administration announced a new national goal for the United States within a decade to achieve energy independence. See President James E. Carter, The Energy

Problem, Address to the Nation, 13 Weekly Comp. Pres. Doc. 560 (April 18, 1977); President James E. Carter, Energy and National Goals, Address to the Nation, 15 Weekly Comp. Pres. Doc. 1235 (July 15, 1979). This goal was to be achieved by increasing the supply of domestic crude oil, by developing new alternate sources of energy, and by conserving existing energy resources. Numerous energy related research and development facilities were established, funded, or subsidized by the Government. Billions of dollars were spent directly by the Federal Government or indirectly through tax incentives to accelerate the development of synthetic fuels, fossil energy research, and EOR technology.

Specifically, regarding the development of EOR technology, in 1979 a

tertiary oil incentive program was adopted by the DOE. Under this program, which effectively expired in early 1981, qualified oil producers were allowed to sell oil at market prices, which prices were substantially higher than the controlled prices of crude oil, in order to offset up to the lesser of $20 million or 75 percent of their expenses in qualified EOR projects. 10 C.F.R. sec. 212.78(a)(2) (1979). For a discussion of the tertiary oil incentive program, see Union Oil Co. of Cal. v. U.S. Dept. of Energy, 688 F.2d 797, 800-804 (Temp. Emer. Ct. of App. 1982). Under the Crude Oil Windfall Profit Tax Act of 1980, Pub. L. 96-223, secs. 23(a) and 201-251, 94 Stat. 229, 256-287, certain oil recovered through EOR technology qualified for a reduced Federal excise tax, and certain

tax credits were made available with respect to the production of oil from tar sands.

In 1980, the U.S. Synthetic Fuels Corp. was established. Energy Security Act, Pub. L. 96-294, sec. 115, 94 Stat. 611 (1980). This corporation was authorized to operate for 12 years and to spend $20 billion in 1981.

Tar sands deposits throughout the United States, particularly in Utah, were identified as potential sources for the production of additional oil through application of EOR technology that might be developed, and a number of governmental and privately sponsored projects were undertaken in an effort to make the recovery of oil from tar sands commercially viable.

The application of primary and

secondary oil recovery methods to oil fields typically results in the recovery of 30 to 40 percent of oil reserves in the fields. The application of EOR technology to oil fields (that already have been worked with primary and secondary oil recovery methods) consists of applying nontraditional, innovative methods of recovering a portion of the remaining oil reserves from the fields. More specific findings concerning the particular EOR technology at issue in this case are set forth later in this opinion.

Basic Structure of Technology-1980

In late 1978 or 1979, Winsor Savery, Richard B. Basile, E. Barger Miller, Werner Heim, Robert Shaftan, William Conklin, and a number of other individuals participated in the formation

of tax shelter limited partnerships with the stated general investment objectives of drilling for oil and natural gas and of obtaining the rights to certain EOR technology that might be developed and become valuable if the price of oil continued to rise dramatically in subsequent years.

Petitioners Hildebrand and Wahl invested in one of the Manhattan Partnerships known as Technology-1980. Initially, the individual general partner of Technology-1980 was Richard B. Basile (Basile), and the corporate general copartner was Glenda Exploration and Development Corp. (GEDCO), a Texas corporation. Basile had no experience with oil and gas exploration, production, or investments. Rather, his experience was in selling tax shelters. Basile did

not personally investigate the merits of the proposed partnership investments. He did not prepare feasibility studies relating to the partnership, nor did he have such studies prepared.

A number of the individual organizers and promoters of Technology-1980, however, did consult with various experts and did obtain and study various reports that had been prepared relating to, among other things, projections of world oil prices, the extent of oil deposits in Utah and Wyoming tar sands properties, the potential for the recovery of oil from tar sands, and the potential for the recovery of natural gas from the Monroe, Louisiana, natural gas field.

Also, certain economic, financial, accounting, and tax analyses and opinions were obtained by the organizers and

promoters of the partnerships. These analyses and these opinions were available to Basile, and much of these analyses and many of these opinions were reflected or summarized in the partnerships' offering memoranda given to prospective investors.

Two hundred and fifty limited partnership units in Technology-1980 were authorized, and 211.5 limited partnership units in Technology-1980 were sold to 142 limited partners.

The total stated subscription price for each limited partnership unit in Technology-1980 was $230,000, payable by each limited partner as follows: (1) $10,000 in cash; (2) two short-term recourse promissory notes, each in the amount of $10,000 with simple interest at 10 percent due respectively on March 1,

1981, and March 2, 1982; (3) a long-term purportedly recourse debt obligation in the amount of $120,000 due in each of four $30,000 installments of principal on December 31, 1992, 1993, 1994, and on May 31, 1995 (with nonrecourse interest at 7 percent); and (4) a nonrecourse, noninterest-bearing long-term debt obligation in the amount of $80,000 due on December 31, 2005.

If all 250 units in Technology-1980 were subscribed to, the following total stated subscription amounts would be owed to Technology-1980:

Cash Due In First 3 Years	Due Under Purportedly Recourse Debt Obligations In 1992-1995	Due Under Nonrecourse Promissory Notes in 2005
$7.5 million	$30 million	$20 million

Similar total amounts were owed to the other Manhattan Partnerships depending on

the number of partnership units sold in each partnership.

In spite of the large current and long-term debt obligations associated with investments in Technology-1980, no credit investigations were undertaken by Technology-1980 with regard to the credit worthiness of the limited partners who invested in Technology-1980.

The stated investment objectives of Technology-1980 (and the other Manhattan Partnerships) were: (1) To drill developmental wells for, and to sell, oil and natural gas located in the Monroe, Louisiana, natural gas field and in other oil and gas producing fields (the "drilling program"), and (2) to prove the economic feasibility of recovering oil from certain tar sands properties using

certain licensed EOR technology.

With regard to the first stated objective (namely, the natural gas drilling program), Technology-1980 (and the other Manhattan Partnerships) entered into an agreement with Glenda Petroleum Corp. (Glenda Petroleum), an affiliate of GEDCO, the corporate general partner of Technology-1980. Under this agreement, Technology-1980 was to acquire from Glenda Petroleum working or operating interests in developmental natural gas drilling property in a natural gas field in Monroe, Louisiana, a field that was already 90 percent depleted. Owners of working interests generally have the right to develop and exploit oil and natural gas on the leased property and are responsible for the cost of development and operation of wells that

are drilled on the property. For each of the first 11 wells drilled, the partnership was to pay Glenda Petroleum approximately $65,000.

In 1980, Glenda Petroleum had approximately 5,000 acres under lease in the Monroe, Louisiana, natural gas field, on a portion of which approximately 300 commercially productive natural gas wells already had been drilled. Technology-1980 entered into a non arm's-length agreement with Glenda Petroleum under which Glenda Petroleum was to drill 35 test wells on the sites or acreage covered by the leases obtained by the Manhattan Partnerships. The acreage, however, that was actually assigned to the partnerships by Glenda Petroleum represented exploratory acreage and had no value based on natural gas reserves.

In the Technology-1980 offering memorandum, projections of the amount of natural gas to be recovered from the property leased by the Manhattan Partnerships from Glenda Petroleum were based on developmental natural gas producing property, which projections were excessive based on the exploratory nature of the property actually assigned to the partnerships. The projections were also excessive in light of the number of wells Glenda Petroleum was to drill each year for all of the Manhattan Partnerships.

In November of 1980, when the exploratory nature of the property assigned to the Manhattan Partnerships was determined, an agreement was entered into between the partnerships and Glenda Petroleum substituting new developmental

property for the original exploratory property.

Costs and revenue from the operation of the gas wells drilled by Glenda Petroleum on behalf of the Manhattan Partnerships were to be shared between the partnerships, Glenda Petroleum, and the owners of the underlying property, as follows:

[SEE TABLE THREE]

In order to achieve its second stated investment objective (namely, the EOR technology program), Technology-1980 entered into certain agreements to lease from Elektra Energy Corp. (Elektra) limited rights to use certain EOR technology to develop pilot projects for the recovery of oil, and Technology-1980 leased from Texoil International Corp. (TexOil) working interests in certain tar

sands and other heavy oil properties that contained deposits of viscous and high pour-point crude oil.

Elektra apparently was owned by various Swiss, Dutch, Panamanian, and Netherlands Antilles corporations, but the identity of the underlying shareholders of these corporations could not be explained by any of petitioners' witnesses and is not disclosed in the record. TexOil was a Delaware corporation owned by a Ron Ferguson.

EOR License Agreements and Debt Obligations to Elektra

Under a 5-year-license agreement, Technology-1980 acquired from Elektra limited rights to use certain purported EOR technology on specified tar sands and heavy oil properties. Under the license

agreement, Technology-1980 also acquired the right to use additional EOR technology, if developed and acquired by Elektra during the term of the 5-year license agreement. Any such additional EOR technology could only be used by the partnerships on the specific tar sands and heavy oil properties leased from TexOil in which the partnerships acquired working interests.

In the late 1970s and early 1980s, the established license fee in the oil industry for the right to use EOR technology was a 2-3 percent running royalty based on the incremental increased oil production, or the income actually realized therefrom, that was attributable to the particular EOR technology being licensed. On the contrary, the license fees

Technology-1980 agreed to pay Elektra with respect to the EOR technology at issue in this case were computed on the basis of the number of limited partnership units in Technology-1980 that were sold. The license fees were not computed on the basis of increased oil production or on the basis of income actually realized that was attributable to any use or application of the EOR technology. The license fees agreed to by Technology-1980 were not arrived at through arm's-length bargaining.

More specifically, in consideration for the 5-year license agreement with respect to certain EOR technology, Technology-1980 agreed to pay license fees to Elektra of $35,000 per year for each limited partnership unit -- a total of $8,750,000 per year -- based on the

anticipated sale of all 250 authorized limited partnership units in Technology-1980. In each of the first 3 years, cash of $885,000 was due from Technology-1980, and the balance of the total annual license fee was to be paid with a $7,865,000 promissory note. In the fourth and fifth years, the total annual license fees of $8,750,000 were to be paid with promissory notes. Over the course of the 5-year EOR technology license, Technology-1980 would become obligated to Elektra for total license fees relating to the EOR technology of $43,750,000 (a total of $2,655,000 in cash and $41,095,000 in promissory notes). Further, the total principal amount of the promissory notes was not due until the year 2005, plus interest at 12 percent, substantially below the

extant prime rate. Because, as stated, only 211.5 of the 250 authorized partnership units in Technology-1980 were actually sold, the amount of the total license fees due from Technology-1980 to Elektra was reduced on a pro rata basis.

The partnerships' promissory notes to Elektra were to be prepaid from available net cash flow, if any, of the partnerships.

By executing the subscription agreement and the limited partnership agreement, each limited partner of Technology-1980 nominally assumed personal liability with respect to a pro rata share of Technology-1980's debt obligations to Elektra and TexOil up to a maximum of $120,000 (which $120,000 corresponded in amount to the portion of each partner's total liability under his

or her subscription agreement with Technology-1980 that was not reflected by promissory notes).

Technology-1980 gave Elektra a security agreement to secure the payment of the promissory notes relating to the license of the EOR technology. Thereunder, Elektra received a security interest in all of the obligations of the limited partners of Technology-1980 relating to their subscription agreements with Technology-1980.

As indicated, the term of the license of EOR technology that Technology-1980 entered into with Elektra was 5 years, beginning on the date the license agreement was executed. Technology-1980, however, had the option to acquire an additional license if certain requirements were met that, in effect,

would allow it to receive an exclusive license from Elektra to continue to use the EOR technology on the specified properties beyond the original 5 -year term of the license agreement.

It is significant that under the license with Elektra, Technology-1980 (and the other Manhattan Partnerships) had the right to use the EOR technology on the specified properties only until a pilot project was installed on the property using the EOR technology. The license did not include the right to engage in any commercial oil production or recovery with the EOR technology. In order to engage in commercial oil production using-any of the EOR technology, Technology-1980 would have had to enter into separate developmental licenses with Elektra with respect to the

very same EOR technology and for which developmental licenses additional consideration or license fees would have been necessary, and which additional license fees were to be based on incremental increased oil production or on income attributable to the use of the EOR technology.

The other 15 Manhattan Partnerships agreed to pay Elektra fees ranging from $12 million to $73 million for licenses to use the identical EOR technology on different properties, under which licenses the partnerships were only entitled to establish pilot projects on the properties using the EOR technology. The license fees agreed to by the other partnerships consisted of a similar combination of cash and long-term promissory notes due in 20 to 25 years.

In vague and general language in the license agreement, Elektra agreed to develop and acquire new or additional EOR technology, and, as indicated, any new or additional EOR technology developed or acquired by Elektra would be covered by the various license agreements with the various Manhattan Partnerships with respect to the specified properties covered by the licenses.

Technology-1980 could terminate without cause the EOR license agreement with Elektra and the heavy oil property lease agreement with TexOil (described below) by giving 120 days' written notice to Elektra (and to TexOil). Also, Technology-1980 apparently could terminate the license agreement with Elektra (or the lease agreement with TexOil) at any time if the partnership

was prevented from establishing pilot EOR projects on tar sands or heavy oil properties due to a U.S. Bureau of Land Management (BLM) wilderness order.

If Technology-1980 terminated the license agreement with Elektra or the lease agreement with TexOil, all of Technology-1980's debt obligations to Elektra would be extinguished except that portion of the obligations that had accrued prior to termination.

Property Lease Agreements and Debt Obligations to TexOil

As stated, in addition to acquiring limited rights to use certain EOR technology, Technology-1980 was to acquire working interests in certain tar sands properties on which the EOR technology could be tested and on which

pilot projects were to be established. In that regard, on December 31, 1980, Technology-1980 acquired from TexOil 20-year working interests in three separate tar sands properties, consisting of a total of 665 acres. Tar sands, generally, are properties that do not contain oil reserves; rather they contain deposits of tar-like hydrocarbons that have limited transmissibility and that generally are not regarded as oil reserves. For a discussion of the meaning of tar sands, see Note, What is "Tar Sand": Examining the Section 29 Credit, 45 Tax Lawyer (1992).

One of the properties was located on the tar sands triangle geologic formation in Eastern Utah and was leased by TexOil from the Federal Government under leases due to expire in 1984 but subject to

possible renewal. The tar sands triangle is an arid, isolated property located in rugged terrain within a wilderness area.

The other two tar sands properties covered by the lease with TexOil were located in the Circle Cliffs geologic formation in Utah and in the Burnt Hollow geologic formation in Wyoming. The Circle Cliffs property was an outcrop, and any oil in the property was recoverable only from mining, not drilling.

The property in the Burnt Hollow geologic formation had low oil saturation and heavy water flow.

As of 1980, with or without the use of EOR technology, there was no proven method for recovery of commercial quantities of oil from the Utah and Wyoming tar sands properties. None of

the tar sands properties leased by the Manhattan Partnerships from TexOil had any proven or probable reserves of oil or natural gas, and commercial exploitation of these properties, even with the use of EOR technology, was highly speculative.

Under the leases with TexOil, allotments of the acreage on these tar sands properties to the various partnerships were arbitrary and related primarily to the number of partnership units sold and to certain assumptions made about the oil in place on the properties. The allotment of the acreage was not based on any professional tests or estimates of economically recoverable oil in place or of hydrocarbon deposits on the properties.

For the working interests in the 665 acres of heavy oil properties that

Technology-1980 acquired from TexOil, Technology-1980 agreed to pay TexOil minimum annual royalties of $1,250,000 based on the expected sale of 250 partnership units.

The minimum annual royalties owed to TexOil by Technology-1980 for the first year were to be paid $110,000 in cash and $1,140,000 with a promissory note. Based on the 211.5 partnership units actually sold in Technology-1980, if not canceled prior to the end of the 20-year lease, total royalties of $21,150,000 would be owed by Technology-1980 to TexOil, payable $93,060 in cash per year for the first 3 years and $964,440 per year for the first 3 years in non-negotiable long-term promissory notes due in the year 2005 and long-term notes of $1,057,500 per year for the next 17 years also due

in the year 2005. The amount of these royalties was computed on the basis of the number of partnership units sold (namely, $5,000 per partnership unit each year for 20 years).

Calculated on a per acreage basis, the amount of the royalties Technology-1980 agreed to pay TexOil represented $31,804 per acre, even though TexOil was paying to its lessors only $100 per acre per year for the same working interests leased to Technology-1980.

Technology-1980's obligation to pay minimum annual royalties to TexOil each year for 20 years was not dependent on the success of any of the EOR technology that Technology-1980 leased from Elektra and that might be tested on the property, nor on the success of any of the EOR technology pilot projects that might be

established. Technology-1980's obligation to pay the royalties was not dependent on the amount of oil recovered from the properties, nor on the amount of oil reserves estimated to be (or actually located) on the properties. The royalties were not determined through arm's-length negotiations, but, instead, were arbitrarily established.

Also, the royalties were agreed to in apparent disregard of the fact that TexOil's leases with the Federal Government with respect to the Utah tar sands properties were due to expire in just 1 to 2 years and that renewability of the leases by TexOil was not certain.

Technology-1980 could terminate its agreement with TexOil without cause on 30 days' written notice, and Technology-1980 could terminate the agreement immediately

if it was prevented from developing the properties due to a BLM wilderness order.

If Technology-1980 terminated the tar sands property lease agreement with TexOil, all of Technology-1980's debt obligations (including the long-term promissory notes) to TexOil would be extinguished except for that portion of the debt obligations that had accrued prior to the termination.

Technology-1980 and TexOil entered into a security agreement to secure Technology-1980's debt obligations to TexOil. TexOil, however, did not file the security agreement with the appropriate governmental entities to perfect its interest therein.

In 1980, Basile, the individual general partner of Technology-1980, apparently disregarded advice of lawyers

and of a recognized oil geologist to the effect that the oil in place estimates relating to the tar sands properties leased from TexOil, upon which the partnerships purportedly were relying, could not be supported and were not reasonable, that the viability of the EOR technology vis-a-vis the tar sands properties was speculative, and that the costs of achieving any successful pilot projects and of any commercial oil production using the EOR technology would likely result in substantial losses to the partnerships.

Basile, on behalf of Technology-1980, did not visit any of the tar sands properties. Basile did not inquire into what TexOil was paying for its leases of the properties leased to the partnerships, nor did Basile attempt to

determine what Elektra was paying for the EOR technology the partnerships were licensing from Elektra, nor for what price the same or similar EOR technology could be licensed from others.

Basile did not obtain any independent opinions concerning the fair market value of the EOR technology license agreement with Elektra, of the EOR technology covered by the license agreement, nor of the leases of the tar sands properties. Rather, Basile was concerned primarily with the reasonableness of the split of potential profits as between Technology-1980 and Elektra, assuming the success of the EOR technology on the properties, assuming substantial oil was produced from the drilling program in the Monroe, Louisiana, natural gas field, and assuming numerous other risk factors all

worked out in favor of the partnerships. The reasonableness of these assumptions was never questioned or considered by Basile.

The offering memorandum of Technology-1980 set forth the following schedule of tax losses investors could expect to realize over the first 4 years of their investment in Technology-1980:

[SEE TABLE FOUR]

Summary estimates were set forth in the Technology-1980 offering memorandum of total estimated oil "reserves" in the Utah tar sands properties leased by the partnerships. Typically, the oil and gas industry regards oil reserves as the amount of barrels of oil that realistically could be recovered from particular properties using known and proven technology. In the

Technology-1980 offering memorandum, however, the term oil "reserves" was used differently and in a misleading manner to refer to the estimated total heavy oil or hydrocarbon deposits on the properties, regardless of the fact that no oil was likely recoverable from the tar sands properties through known and existing technology.

For example, with regard to the 250 partnership units in Technology-1980 that were offered for sale, Technology-1980 was to be assigned lease interests in 745 acres of tar sands properties, and the offering memorandum estimated that approximately 50 million barrels of oil "reserves" were located thereon, and thereby implicitly represented to investors that a significant portion of such estimated oil reserves could

realistically be recovered on behalf of Technology-1980 through application of EOR technology.

These projections were made by Technology-1980 in the offering memorandum in spite of the fact that as of 1980 no existing EOR technology had proven successful in the recovery of any oil from the Utah and Wyoming tar sands properties.

The offering memorandum of Technology-1980 did not contain any projections or estimates: (1) Of income or profits relating to investments in Technology-1980; (2) of income that might be realized in connection with the license of EOR technology for use on the tar sands or heavy oil properties; (3) of the value of the EOR technology licensed from Elektra; nor (4) of the natural gas

production anticipated from the partnerships' leases of working interests in the Monroe, Louisiana, natural gas field.

Certain financial analyses relating to various aspects of investments in Technology-1980 were undertaken on behalf of the promoters of the partnerships by various companies and individuals experienced in the oil and gas industry, but much of the information so provided was not included in the offering memorandum given to investors. For example, one document (for distribution only to investment advisers, accountants, and attorneys, and "not to be shown to potential investors") estimated that the tar sands or heavy oil properties leased by Technology-1980 contained total "reserves" of approximately 50 million

barrels of oil and that between "20 percent and 70 percent of this oil-in-place is estimated to be recoverable, utilizing the [EOR technology] licensed by the Partnership."

The above referred-to document also projected, for 1981 through 1995, natural gas production and partnership net cash flows from Technology-1980's interest in the Monroe, Louisiana, natural gas field, in part as follows:

Year	Total Gas Production (mcf)	Cash Flow ($)
1981	101,068	182,749
1982	234,226	512,838
1983	418,434	1,062,337
1984	529,572	1,549,239
1985	617,999	2,072,020
1986	702,210	2,618,885
1987	818,516	3,402,318
1988	954,422	4,417,317
1989	1,119,151	5,764,483
1990	1,323,938	7,596,238
1991	1,578,093	10,081,725
1992	1,890,611	13,441,456
1993	1,914,430	15,158,220
1994	1,862,455	16,382,794
1995	1,823,745	17,822,142

The projections set forth in the above document, relating to the production from the Monroe, Louisiana, natural gas field, were based on, among other things, the following assumptions for all 15 years covered by the projections: (1) Inflation will average 10 percent per year through 1985, and 7 percent per year thereafter; (2) gas prices will rise each year at a rate 4 percent above the general inflation rate; (3) suitable

developmental oil and gas properties will remain available during the developmental drilling program; and (4) each new well will have the same average production curve over its expected life. In various Technology-1980 promotional material, significant additional assumptions were made by others who were involved in promoting and opining on the economics of the partnerships.

The validity and reasonableness of the above assumptions, however, generally were either not commented on in the promotional material, or the individuals involved commented evasively to the effect that the assumptions "appear to be reasonable", without giving specific opinions as to whether the assumptions were reasonable. Even where statements of the of "apparent reasonableness" of

stated assumptions were made, the individuals making such qualified statements did not have the background or qualifications to do so.

The failure of many of the individuals who (on behalf of the partnerships) opined on aspects of the EOR technology license and lease agreements to expressly and clearly address the reasonableness of the assumptions on which their opinions were based, and in many cases their lack of experience to do so, renders their opinions of little value and causes their opinions to constitute little more than mathematical calculations based on the stated assumptions. Examples of such opinions (based on assumptions and therefore constituting little more than mathematical computations) are found in trial Exhibits 25 (part G), 1021, 1022,

and 1304. At least one of petitioners' witnesses who authored such a "non-opinion" acknowledged at trial that the word "assumption" was intentionally used in his report because he did not have enough data to make professional estimates.

A significant number of the individuals who opined on the legal, economic, and technical aspects of the partnerships' activities received compensation for their services based on the number of partnership units sold, a compensation arrangement inconsistent with their professed position as independent experts. Some of the same individuals also invested in the partnerships, and some actually sold interests in the partnerships for commissions, further undermining their

independence from the partnerships.

Effective January 1, 1981, Technology-1980 and 15 other Manhattan Partnerships formed a joint venture which pooled the tar sands leases of all 16 partnerships, and the joint venture interests of all of the partnerships were then managed by GEDCO.

The partnerships hired William Kirkwood, who had experience in drilling on tar sands properties, to conduct drilling operations on the tar sands properties in connection with efforts to establish EOR technology pilot projects on the properties. Under Mr. Kirkwood's supervision and with the assistance of Dr. Todd Doscher, a specialist in steam injection technology, a test well was drilled on the Burnt Hollow property of the partnerships and a modularized steam

injection system was installed. The initial test results did not produce commercial quantities of oil, and the pilot project was eventually suspended.

Of the total cash contributions received by the Manhattan Partnerships from limited partners, excessive amounts thereof were paid to various promoters, lawyers, accountants, and salesmen working for or on behalf of Elektra, and little was available for the development of EOR technology. Expenses that were paid apparently relating just to the formation and organization of the Manhattan Partnerships totaled $1,806,672.

Basile received $500,000. Basile's wholly owned corporation and employees thereof directly or indirectly received an additional $750,000. An accounting

firm which performed no services for the partnerships received $36,963.

Two law firms received $1,940,123 for agreeing to defend, in subsequent years, tax benefits that were to be claimed in connection with the limited partnership investments. The law firms later reneged on their commitments but never returned any portion of the $1,940,123.

An attorney who assisted in the preparation of the offering memorandum, who secured title opinions on property leased from TexOil, and who sold interests in the partnerships, received $1,210,117. The amount of some of the legal fees paid by the partnerships was based not on legal services rendered but rather on the number of partnership units sold. Various salesmen received a total of $5,152,615 in connection with the sale

of limited partnership units in the Manhattan Partnerships.

Barton Enhanced Oil Production Income Fund

Barton is one of three similar TEFRA limited partnerships that constitute the Wichita Partnerships that were formed in 1982. The corporate general partner of Barton was American Excel, Inc. (American Excel), a Utah corporation. In 1984, American Excel resigned and was replaced by Energy Associates, Inc. (Energy Associates), a Kansas corporation.

Prior to the formation of Barton in late 1982 and before agreeing to become the individual general partner of Barton, Krause, who had significant experience in selling tax shelters, undertook to study the oil and gas industry and EOR technology.

The stated business plan of the Wichita Partnerships that were formed in 1982 was as follows: (1) To purchase and operate working interests in producing oil and gas properties for recovery of oil and natural gas using primary and secondary recovery methods (the drilling program); (2) to license and apply EOR technology to establish pilot projects on the above properties (the EOR technology program); and (3) to fund continued research and development of EOR technology, and -- as the value of the EOR technology increases -- to sublicense or distribute the EOR technology to third parties in certain specified geographic areas for sublicense fees (the distributorship program).

Oil price projections that were the basis for certain financial analysis

relating to the Wichita Partnerships used, among other things, price projections set forth in the DOE's 1980 report which -- by late 1981 and certainly by the time Barton and the other Wichita Partnerships were formed in late 1982 were of questionable validity due to the decline that had occurred by that time in world oil prices.

In 1982, 27 limited partners purchased a total of 50 limited partnership units in Barton. The subscription fee for each limited partnership unit was $34,400, with $14,800 of each subscription fee payable partly in cash and partly with purportedly recourse 11.5-percent short-term promissory notes as follows:

Cash	Promissory Note	Due Date
$5,000	--	On subscription
--	$5,000	June 15, 1983
--	1,600	June 15, 1984
--	1,600	June 15, 1985
--	1,600	June 15, 1986

The $19,600 balance of each limited partner's subscription fee per partnership unit that was not reflected by the above cash and short-term promissory notes was stated to be due in 15 years on September 30, 1997. No written promissory notes were executed in connection with this $19,600 balance of the subscription fee.

As stated, under the limited partnership agreement, Barton was required to retain a specific percentage of its cash flow and to reinvest the retained cash flow in Barton. Reinvested funds were to be treated as additional capital contributions made by the limited

partners and thereby would operate to reduce the limited partners' debt obligations under the subscription agreements.

When Barton was first formed, Barton did not acquire rights to any oil and gas producing properties. Rather, Barton contracted with Midco Drilling, Inc. (Midco), to acquire on behalf of Barton working interests in oil and gas producing properties and to operate the working interests. As compensation for acquiring working interests for Barton, Barton was to pay Midco a 5-percent commission on the purchase price of the working interests. The compensation Midco was to receive for operating the working interests on behalf of Barton is not in the record.

Barton agreed to spend at least 25

percent of the initial cash contributions received from limited partners on the acquisition of oil and gas properties.

As part of its EOR technology program, and even though Barton did not then have any lease rights with respect to any particular property on which the technology could be applied, Barton obtained from Hemisphere Licensing Corp. (Hemisphere), a Texas corporation and the successor corporation to Elektra, a license for the use of, and distributorship rights to, a purported "portfolio" of EOR technology. The amount of the fees to be paid by Barton to Hemisphere in exchange for the license of the EOR technology portfolio was based on the number of limited partnership units sold. The license was to have a term of 25 years.

Hemisphere's sole shareholder was Petrotec Systems, A.G., a Swiss corporation owned by a series of offshore, tax haven entities, the ultimate ownership of which could not be explained by any of petitioners' witnesses and which is not established in the record.

The portfolio of EOR technology licensed by Hemisphere to Barton (and the other Wichita Partnerships) contained essentially the same EOR technology as that licensed by Elektra to Technology-1980 (and the other Manhattan Partnerships), but it also contained additional purported EOR technology not specifically mentioned in the license to the Manhattan Partnerships.

The license fees were structured to provide substantial tax write-offs to the

investors. Barton's offering memorandum represented that investors would receive tax write-offs of 3 to 1 in the first and second years, and 2 to 1 in the third, fourth, and fifth years of their investments in the partnerships.

With certain adjustments described below, in consideration for the- license agreement with Hemisphere regarding the EOR technology (which included the distribution and extended distribution rights), Barton agreed to pay Hemisphere license fees of $8,500 per partnership unit per year. Barton's obligation for the license fees was not based on, nor was it dependent on the realization of any income attributable to the use or application of the EOR technology, and the fees were not established by arm's-length negotiations.

For each of the years 1982 through 1986, payment by Barton of the $8,500 annual EOR technology license fees due with respect to each partnership unit was to be made partly in cash and partly with 12-percent promissory notes as follows:

[SEE TABLE FIVE]

Minimum installment payments were due on each of the promissory notes outstanding with respect to each partnership unit as follows:

Amount Per Unit	Due Dates
$2,000	September 30, 1993
4,000	September 30, 1994
6,000	September 30, 1995
11,000	September 30, 1996
19,600	September 30, 1997

Otherwise, the only payments due on the above promissory notes prior to the

maturity dates of the notes were triggered by the cash flow of the partnerships.

The total amount of all of the promissory notes to be issued by Barton was $4,550,000. Barton, however, only executed promissory notes totaling $1,580,500.

Other Wichita Partnerships, for a license to use the same EOR technology on other property, were to issue, promissory notes to Hemisphere in total amounts as high as $64 million.

The amount of Barton's debt obligations to Hemisphere with respect to which each of the limited partners purportedly assumed personal liability was $19,600 (which $19,600 corresponds in amount to the portion of each partner's total liability under his or her

subscription agreement with Barton that was not reflected by promissory notes). Each limited partner's $19,600 liability, however, was not effective immediately. The schedule below reflects the dates on which the limited partners' liabilities on Barton's debt obligations to Hemisphere were to become effective:

Amount of Liability Assumed	Effective Date of Assumption
$5,000	On subscription
5,000	July 1, 1983
3,200	July 1, 1984
3,200	July 1, 1985
3,200	July 1, 1986
Total $19,600	

In the event Barton fails to make the payments due within 60 days, Hemisphere has the right either to declare the full principal amount of the outstanding notes due and payable and to initiate collection proceedings directly against

each limited partner who has not made the required contributions, or to foreclose on the limited partner's interest in the partnership.

Barton and Hemisphere entered into a security agreement to secure Barton's debt obligations to Hemisphere. Hemisphere, however, did not file the security agreement with the appropriate governmental entities to perfect its interest therein.

At the end of any calendar year, Barton could terminate without cause the license agreement with Hemisphere by giving Hemisphere 90 days' written notice. If Barton terminated the license agreement, the balance due on Barton's promissory notes and other debt obligations to Hemisphere would be extinguished except for that portion of

such obligations that had come into existence prior to the date of termination.

The license agreement entered into between Hemisphere and Barton (and the other Wichita Partnerships) was not signed by anyone with authority to sign on behalf of Hemisphere. The license agreement purported to give Barton (and the other Wichita Partnerships) the right to use for 25 years the EOR technology on property in which the partnerships were to lease working interests, and the right to sublicense the EOR technology as described below.

Krause, as general partner, did not attempt to determine the fair market value of the EOR technology, nor of the license agreements. Krause did not retain an independent expert to advise

him with regard thereto. Rather, Krause relied primarily on persons affiliated with Hemisphere who had significant conflicts of interest with the partnerships. Further, Krause did not corroborate or document that Barton.actually received legal transfer of the rights to any EOR technology.

A joint marketing organization was to be established between Barton and Hemisphere to distribute or sublicense EOR technology in territories located proximate to Barton's territories. Generally, Barton was entitled to receive a percentage of any royalties actually received by Hemisphere with respect to such sublicenses. It is particularly significant that under any such sublicenses that would be established, Hemisphere and Barton were to receive

payments from the sublicensees based not on any fixed fee schedule, but rather only on running royalties on incremental increased oil production attributable to the EOR technology. As indicated, the fees due from Barton to Hemisphere were not contingent upon the success of the distribution program. Barton (and the other Wichita Partnerships) relinquished to Hemisphere all control over the marketing program.[2]

As part of Barton's stated business

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[2]Under an extended distribution agreement, Barton had the exclusive right to distribute or sublicense the EOR technology within four miles of the boundaries of any of the other properties in which it acquired working,interests, plus the nonexclusive right to distribute or sublicense any of the EOR technology in California, Colorado, Illinois, Kansas, Ohio, Oklahoma, Pennsylvania, Texas, Wyoming, Utah, and the Province of Alberta, Canada.

plan, working developmental oil and gas interests were acquired on behalf of the Wichita Partnerships in producing oil and gas properties in the Parker Field in Pennsylvania, in the Illinois Basin in Illinois, in the West Peck Prue Sand Unit and in the Centerview Property in Oklahoma, and in the Sunburst Field in Montana.

The Parker Field had been producing over 60 years and was one of the oldest oil fields still in production in the United States. It has been described as "the antiquity of the oil industry * * * The most ancient, crude, primary mechanism of producing oil in probably the most rundown dilapidated condition." The Parker Field is 99 percent depleted. As of December 31, 1981, no successful EOR project had been conducted on the

Parker Field.

Despite its age and the extent to which oil had already been produced from the Parker Field, it was represented to investors in the partnerships that the field was a "virgin field". Acreage was assigned to the various partnerships based on the number of limited partnership units sold and on the assumed oil in place.

Although charges were billed as early as 1981 to the Wichita Partnerships with respect to the lease of property in the Parker Field, no acreage within the Parker Field was assigned to the specific Wichita Partnerships until October of 1983, and the assignment documents were then backdated to 1981.

The lease payments agreed to by the Wichita Partnerships with regard to the

property leased in the Parker Field were in excess of fair market lease rates.

One of the properties. eventually assigned to Barton under the license of EOR technology from Hemisphere was located within one-half mile of the Kern River Field in Southern California, one of the five highest oil producing fields in the continental United States. Because of the proximity of this partnership property to the Kern River Field, the Kern River Field or a portion thereof was itself within the exclusive sublicensing or distribution territory of Barton. As of 1982, however, no successful EOR project had been tested in the Kern River Field.

During 1983 and 1984, Petroleum Sciences, Inc., and others on behalf of the Wichita Partnerships, performed some

field tests and studies of some of the EOR technology on properties in which the partnerships had purchased working interests. The Parker Field was studied for its suitability for use of the slim hole drill technology and of steam stripping technology.

A test of certain microbial enhanced oil recovery (MEOR) technology was conducted on the Illinois Basin property. Use of the carboxymethylated surfactant technology was studied on the Centerview, Oklahoma, field. A polymer pilot was conducted on the West Peck Prue Sand Unit in Oklahoma.

A number of studies were conducted by others unrelated to the partnerships of the biosurfactant and emulsion blocking technology on the West Peck Prue Sand Unit in Oklahoma and the Kern River Unit

in California.

With regard to the research and development aspect of Barton's stated business plan, Krause negotiated with Hemisphere a requirement that Hemisphere would use a portion of the funds received from the EOR license fees to fund continuing research and development on EOR technology. Krause obtained a commitment from Hemisphere for Hemisphere to invest in EOR research and development over the subsequent 25 years a minimum of $25 million and a maximum of $100 million. Further, Krause negotiated with Hemisphere that at least one-half of the research and development on EOR technology that was to be conducted on behalf of Hemisphere by Petroleum Sciences, Inc., was to directly relate to the use of EOR technology on properties

in which Barton owned working interests.

With regard to the EOR research and development that Barton (and the other Wichita Partnerships) were to pay for, such research was to be conducted by third parties. Barton was to have no authority to conduct, direct, or control the research and development, nor was Barton to acquire any ownership interest in any EOR technology that might be established as a result of the research and development.

With regard to the marketing and distribution of EOR technology, Barton relinquished all control to Hemisphere.

In 1983, Krause renegotiated the price the Wichita Partnerships were to pay with regard to the original oil production rights they acquired in the Parker Field.

In 1986, Barton (and the other Wichita

Partnerships) and Hemisphere amended the EOR technology license agreement and reduced the annual EOR license fee owed by Barton for 1987 and thereafter to a total of $5,000 per year.

EOR Technology

In general, in the late 1970s and early 1980s, EOR technology and the use thereof was a relatively new but exciting development in the oil industry.[3]

Certain limited EOR technology had

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[3]Some of the significant publications prior to 1980 that had been written about EOR technology are the following:

Interstate Compact Commission, Secondary and Tertiary Oil Recovery Processes (1974).

The National Petroleum Council, Enhanced Oil Recovery (1976).

U.S. Congress, Office of Technology Assessment; Enhanced Oil Recovery Potential in the United States (1978).

been developed and was available from a number of companies before and during the years in issue. For example, directional drilling, under-reaming, steam flooding, fire flooding, foam blocking, solvent flooding, gravity drainage, and RF heating constituted EOR technology that to a certain extent, had been developed, and such EOR technology was available from suppliers other than Elektra.

EOR technology is known to be site specific (i.e., one type of EOR technology may work well on one property but not at all on another property) and for that reason the probable or likely usefulness and value of particular EOR technology on particular property can only be determined by elaborate, expensive, and time consuming tests and experimentation. For this reason, the

acquisition of a "portfolio" of EOR technology for use on particular properties typically does not occur in the oil industry. Rights to use particular EOR technology are generally acquired only after the particular technology is tested on the property, and then rights are acquired only to the particular EOR technology, if any, that has tested successfully on the property.

The offering memorandum of Technology-1980 described four types of EOR technology that purportedly were covered by the license with Elektra: (1) TEC; (2) Carmel VaporTherm (Carmel); (3) ElektraFlo; and (4) SME Oil Drive. The offering memorandum inaccurately suggests that the above EOR technology, in general, was existing, developed technology. In 1979, 1980, 1981, and

1982, however, only the TEC and the Carmel processes were developed to any significant extent.

Both the TEC and the Carmel technology were available in the market place to the partnerships directly from the companies that had invented those processes for a running royalty based on incremental increased production (similar to the royalties Elektra agreed to pay for the technology). In general, for the right to use and sublicense the TEC technology, Elektra had agreed to pay The Electrothermic Co. and Carmel Energy Corp. only a 7.5 percent running royalty on incremental oil production attributable thereto. Elektra had no obligation to pay fixed fees for the use of either the TEC or the Carmel technology.

As described in the offering memorandum of Technology-1980, the TEC technology was a process of carrying an electrical current down an oil well casing and into an oil reservoir where the electrical current disperses into the oil reservoir and heats "most heavy oils to a temperature where they will flow freely for less than $2 per barrel". In fact, the TEC technology, developed by The Electrothermic Co., does not increase the overall recovery of oil from a reservoir. Rather, by heating the oil in a reservoir proximate to the well bore opening, the TEC technology simply increases the speed or flow of oil into the well.

As of 1980, the TEC technology had been field tested in Kansas and Texas, and six patents had been obtained with

respect to the TEC technology. But prior to the time Elektra and the Manhattan Partnerships entered into their license agreements with respect to TEC technology, the TEC technology had not been tested on the Utah or Wyoming tar sands properties leased by the Manhattan Partnerships. The Technology-1980 offering memorandum inaccurately suggested that the TEC technology, as of May 31, 1980, had advanced beyond the test stage and that it was being used for commercial exploitation of oil.

The license Elektra obtained from The Electrothermic Co. for use of the TEC technology was not exclusive, and owners of working interests in oil producing properties could have licensed the TEC technology directly from The Electrothermic Co. if the TEC technology

turned out to be a viable process on tar sands properties.

As described in the Technology-1980 offering memorandum, the Carmel technology was a process for injecting steam and high combustion gases into oil reservoirs in order to increase the pressure within the reservoirs and to thereby reduce the viscosity of the oil and to increase the overall recovery of oil from the reservoirs. The Carmel technology was an existing technology, and it or similar steam injection processes were available from a number of companies.

The Carmel technology required substantial amounts of water which was not available at the tar sands properties of the Manhattan Partnerships without incurring very substantial additional

costs. Earlier successful tests of the Carmel technology had taken place on properties in Kansas and Missouri, but not on properties that were[4] comparable to the partnerships' tar sands properties in Utah and Wyoming. Even though the Utah tar sands properties had characteristics different from midwestern heavy oil properties, prior to the time Elektra and the Manhattan Partnerships obtained a license to use the technology, the Carmel technology was not tested on the Utah tar sands property.

The DOE was interested in the Carmel technology, and had provided some of the funding for the tests of this technology in Kansas.

The purported ElektraFlo technology

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[4]As amended pursuant to Order dated March 31, 1993.

consisted of the use of a particular combination of EOR technology (namely, radio frequency heating to preheat the solid oil, injection of steam into the reservoir as a drive fluid, injection of solvents, fire flooding for heat and drive energy, and gravity drainage). The offering memorandum of Technology-1980 inaccurately described the ElektraFlo technology as an existing oil recovery process involving --

> the use of enlarged boreholes to enter a formation. After such entry has been made, long electrodes are inserted in small diameter holes which have been drilled radially from the borehole into the formation so as to create an area around the borehole which can be heated in such a way as

to recover most of the oil within the radius of the electrodes. During and after this phase of the process, the area within the radius of the electrodes can be used to heat injected water and solvents so as to further reduce the viscosity of the oil in the formation and create the steam pressure necessary to recover oil from the surrounding formation. As the size of the sweep area increases, additional production boreholes may be drilled around the primary borehole.

In fact, as of the late 1970s and early 1980s, the ElektraFlo process was merely an idea or concept on which some Swiss based companies were doing research

and had obtained a Swiss patent.[5] The Technology-1980 offering memorandum elsewhere did acknowledge that the ElektraFlo technology had not been tested anywhere in the world.

The offering memorandum of Technology-1980 inaccurately suggested that the SME Oil Drive technology consisted of a developed existing system or technology, as follows:

> The SME Oil Drive System * * * is designed to eliminate the need for the heavy, expensive sucker rod pumping systems that are presently operating in most oil fields in the country.

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[5]The ElektraFlo process was patented in Switzerland in 1980. A U.S. patent was applied for in 1981, and a U.S. patent was issued for the ElektraFlo technology in 1984.

The SME Oil Drive System is a compact, energy efficient pumping system that is lowered to the bottom of an oil well. This system eliminates the need for sucker rods and above ground equipment. The unit, which acts as the entire pump system, has no moving parts, other than the pump piston; it is entirely solid-state, and requires little or no maintenance. The key element in the SME Oil Drive System is a Shape Memory Alloy. This alloy can be bent or stretched, and then restored to its original shape by simply raising the temperature of the alloy by approximately 50 F.

The SME Oil Drive is based on utilizing the difference between the force necessary to stretch the memory alloy and the restoring force

generated by the alloy when it is heated. The alloy cables of the pump system are elongated with a pre-stressed load while the cables are cool. When the temperature of the alloy is raised, it contracts to its original length. This elongation and contraction cycle drives the pump mechanism. An additional benefit of this pump system is that any excess heat will be absorbed by the oil in the down hole flow string, thereby reducing the viscosity of the oil in place.

In fact, the SME Oil-Drive had not been tested anywhere. It was merely an idea or untested concept of Neil Rogen, president of Elektra, that was being tested in a laboratory in the late 1970s and early 1980s. Elektra obtained rights

to the SME Oil Drive technology from Elektra's president. These rights cost Elektra $13.32 for each limited partnership unit.

As indicated earlier herein, the offering memorandum of Barton set forth what it referred to as a "comprehensive package" or "portfolio" of EOR technology that purportedly was developed and was to be licensed from Hemisphere. Described as the "fundamental components" of the portfolio were: (1) Biosurfactant production technology; (2) application systems for biosurfactants; (3) downhole coal-fired steam generator; and (4) blocking agents. The offering memorandum of Barton described these components in general, vague and misleading language, in part, as follows (quoting from a promotional document published by

Hemisphere and Petrotec Systems, A.G.):

(1) Bio-Surfactant Production. A bio-surfactant will be selected to match the particular reservoir in which it is to be used. A bio-reactor will be developed for the field operator. In a continuous fermentation process occurring in the bio-reactor, the microbes will convert lease crude oil (or molasses and agricultural wastes) to powerful but inexpensive surfactants. Metabolic by-products will also include co-surfactants (alcohols) that are needed to maximize the effectiveness of the surfactants.

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(2) Application Systems for Bio-Surfactants. When liquid surfactants are injected as a slug in

a conventional chemical flood they tend to escape through high permeability channels. The resulting inefficiency can make the flood uneconomical or even completely ineffective.

In the Petrotec System, surfactants are injected throughout the field in aerosol form. The resulting surfactant dispersion should improve the efficiency of water, gas and steam floods.

* * * * *

To increase the effectiveness of the aerosol surfactant flood, numerous small diameter injection holes are required throughout the flooded area. This need led to the development of a slim-hole drill by Maurer Engineering,

a leader in the field of specialty drilling and completion techniques. Initial tests on this drill have been successful.

(3) Downhole Coal-Fired Steam Generator. This system, designed by Hemisphere, uses a wet air oxidation process. This will allow coal costing $1.50 per million BTUs to be used in place of oil costing $6.00 per million BTUs. The developmental engineering will be in conjunction with Zimpro, the world's leading manufacturer of wet air oxidation systems. The goal is to reduce the cost of supplying steam to heavy oil production zones deeper than 2000 feet by 50 percent or more as compared to conventional systems.

(4) Blocking Agents. Hemisphere is

developing a blocking cement that will seal the high permeability channels through which sweep gases and steam tend to escape. This "override" effect can result in leaving up to 70 percent of the oil in a reservoir after the steam drive has to be shut down. If the "overriding" can be prevented and the sweep gas or steam forced through oil saturated zones, the economics of steam and gas recovery systems can be greatly improved.

Most of the above purported EOR technology, however, was undeveloped, untested, or still being tested, and in 1982, of very speculative usefulness and value, and the offering memoranda and promotional material used by Hemisphere and the Wichita Partnerships exaggerated

the development of the technology and obfuscated the speculative value thereof.

A few examples from one of the promotional brochures (entitled "The Hemisphere Technology Portfolio" dated September 15, 1982) of this exaggeration of the development of the EOR technology are illustrative. MEOR technology is described as follows:

> In recent years, the enormous potential inherent in the use of microbes for EOR purposes has been acknowledged by an increasing number of scientists and engineers. Microbes come in an endless variety and have the capacity to synthesize a wide range of chemicals and gases that can favorably enhance the recovery of oil.

The exploitation of this microbial

potential has resulted in the development of a new category of EOR technology, known as Microbial Enhanced Oil Recovery (MEOR). This technology promises to become a cost effective means for overcoming the reservoir problems of low pressure, high surface tension, and high viscosity.

MEOR is a field of technology in which Hemisphere believes that it has the potential to improve substantially, if not revolutionize, the techniques and economics of enhanced oil recovery. This belief is based upon the stated opinions of the world-renowned microbiologists who are directing its research, and upon the laboratory test results that these scientists have already achieved with

the proprietary MEOR processes described in this Portfolio.

The status of thermal-shock assisted drilling is described as follows:

To increase the efficiency of the water-jet drill bit, Schalcher & Partners of Zurich, in cooperation with I.E.T., are designing, and intend to develop, a system to heat the formation immediately ahead of the bit so as to take advantage of the shock effect, resulting from the water flowing from the water jets adjacent to the preheated rock.

A primary goal of the water-jet drill bit and thermal-shock assisted drilling programs is to reduce the axial thrust, which causes the need for ever increasing power in

horizontal drilling, as the drill moves further into the bore. (In horizontal drilling, drill stem and pipe weight works against the driller, instead of for him, as in conventional vertical drilling.) If thrust is reduced, more of the driving power is applied to the drill bit; the strength requirement (and the weight and cost) of the drill stem is reduced and directional control is more easily and accurately accomplished.

The status of exploding wire assisted drilling technology is described as follows:

> This invention is a hard-rock drill bit that simultaneously fractures and drills by generating shock waves using

a high energy electrical discharge. The design goals are a doubling of drilling rates and a 75 percent reduction in hard rock drilling costs. Laboratory tests have demonstrated feasibility and the effort is well into the preliminary drill bit design phase. * * *

In light of the largely speculative, undeveloped, and untested nature of most of the EOR technology licensed to the Manhattan and Wichita Partnerships, it can only be concluded, as we do, that the offering memoranda and promotional material of both Technology-1980 and of Barton were misleading and less than candid in the overly optimistic manner by which they described the EOR technology to be licensed by the partnerships. No

adequate explanation is found anywhere in the record in this case to justify how Elektra and Hemisphere and the "experts" who associated themselves with Elektra and Hemisphere could have been so optimistic about the value of the EOR technology licensed to the partnerships.

By 1981, some additional potential EOR concepts or ideas had been identified, but they had not reached any stage of development. Some potential additional EOR technology was in the process of being experimented with. Only one additional EOR technology -- namely, the slim hole drill -- ever reached the developmental stage.

Many of the undeveloped EOR concepts, as conceived and if ever developed, would be dependent upon successful development of other undeveloped EOR concepts.

During the 2 months from September 3, 1979, through November 1, 1979, the purported ElektraFlo technology, along with other purported but undeveloped EOR technology, was transferred or sold a number of times between various individuals and entities who were involved in the early stages of the formation of the Manhattan and Wichita Partnerships. Those transactions involving the eventual transfer to Elektra of the EOR technology included in the license to the Manhattan Partnerships are summarized below:

[SEE TABLE SIX]

Werner Heim (Heim) could not remember how the price for the rights to the ElektraFlo and other purported EOR technology increased in value from $170,000 to $10 million in just 1 month.

Heim stated:

> It's hard to explain, but it was done like that [by the lawyers who] formed this company, and they prepared all these documents * * *. I think that must have been for tax reasons that the lawyers did put the $10 million dollars down for further tax consequences.

Three transactions occurring on November 1, 1981, leading to the transfer of EOR technology to Hemisphere are summarized below:

[SEE TABLE SEVEN]

No apparent consideration was associated with the November 1, 1981, transfer from Heim to Shalelectric, S.A. But on the same day, Shalelectric transferred the EOR technology to Columbus Valley for a stated $10 million. Heim could not explain how the $10 million figure was arrived at other than to explain that it was "done by the lawyers".

As indicated in the above two schedules with regard to the November 1, 1979, transfer from Mardyn, N.V. to Elektra, and the November 1, 1981, transfer from Columbus Valley to Hemisphere, no fixed consideration or fee of any kind was to be paid. All payments or consideration for the EOR technology that were due from Elektra and Hemisphere were contingent on the "installation" of the EOR technology on oil and/or gas producing properties and on income attributable to the use of the technology. Because none of the relevant EOR technology was ever installed, neither Elektra nor Hemisphere was ever obligated to pay Mardyn, N.V., or Columbus Valley anything with regard to the EOR technology.

No income was realized by

Technology-1980 or by Barton (or by any of the other Manhattan and Wichita Partnerships) from the EOR technology.

None of the rights to the EOR technology that Technology-1980, Barton, and the other Manhattan and Wichita Partnerships acquired had any significant value. Further, the fair market value of the EOR technology licenses which Technology-1980 and Barton acquired and for which they agreed to pay millions of dollars had no significant economic value.

Other Matters

Petitioner R.A. Hildebrand is a geological and mining engineer and has worked for Union Carbide on research and development relating to the recovery of oil and natural gas through secondary recovery methods. Hildebrand reviewed

the offering memorandum and the various reports and analysis attached to the offering memorandum.

Hildebrand and two associates hired an independent geologic engineer to review Technology-1980's offering material. After the above review and after discussing the proposed investment with his tax accountant who recommended the investment, Hildebrand invested in Technology-1980.

Krause, in 1981, invested in Barton and agreed to be a general partner of Barton only after significant investigation and review of the proposed investment. He familiarized himself with existing EOR technology and with various ongoing research relating to the development of new EOR technology. He read various industry and government reports

concerning EOR technology. He was instrumental in negotiating a number of the provisions of the Wichita Partnerships that are different from those of the earlier Manhattan Partnerships and that are more favorable to the partnerships.

The following receipts, expenses, and losses were reported by Technology-1980 on its Federal income tax returns for 1980 through 1984:

[SEE TABLE EIGHT]

Of the total cumulative losses of $23,016,260 claimed by Technology-1980 for 1983 and 1984, $16,708,500 related to the license fees due Elektra and the minimum annual royalties due Hemisphere, and the remaining $6,307,760 related to interest accrued on the notes to Elektra and TexOil and other miscellaneous

expenses.

Revenue or income earned by Barton (and the other Wichita Partnerships) was minimal. The following receipts, expenses, and losses were reported by Barton on its Federal income tax returns for 1982 and 1983.

[SEE TABLE NINE]

Of the total cumulative $1,005,493 in losses claimed by Barton in 1982 and 1983, $907,992 related to the license fees owed to Hemisphere.

After license fees, marketing fees, and lease obligations were paid, only 6 percent of Technology-1980's and none of Barton's cash received from investors was left for working capital.

In notices of deficiency issued to petitioners R.A. Hildebrand and Dorothy L. Hildebrand-Wahl, respondent disallowed

the net losses claimed on petitioners' 1980, 1981, and 1982 individual Federal income tax returns arising from the annual license fees owed by Technology-1980 to Elektra, the minimum annual royalties owed by Technology-1980 to TexOil, and the accrued interest and other expenses claimed by Technology-1980.

Respondent issued a timely FPAA to petitioner Krause, as the tax matters partner of Barton. In the FPAA, respondent made adjustments to the 1982 and 1983 Federal partnership tax returns of Barton disallowing the net losses claimed by Barton arising from the annual license fees owed by Barton to Hemisphere and from the accrued interest and other expenses claimed by Barton.

OPINION

In general, the net losses of Technology-1980 and of Barton are not deductible unless the activities of the partnerships were engaged in with actual and honest profit objectives. Nickeson v. Commissioner, 962 F.2d 973 (10th Cir. 1992), affg. Brock v. Commissioner, T.C. Memo. 1989-641; Karr v. Commissioner, 924 F.2d 1018, 1023 (11th Cir. 1991), affg. 91 T.C. 733 (1988); Dreicer v. Commissioner, 78 T.C. 642, 644-645 (1982), affd. without opinion 702.F.2d 1205 (D.C. Cir. 1983).

Whether activities of partnerships were engaged in with actual and honest profit objectives is analyzed at the partnership level. Antonides v. Commissioner, 91 T.C. 686, 694-695 (1988) (Court reviewed), affd. 893 F.2d 656 (4th Cir.

1990); Siegel v. Commissioner, 78 T.C. 659, 699 (1982); Branness v. Commissioner, 78 T.C. 471, 505 (1982), affd. 722 F.2d 695 (11th Cir. 1984).

The factors set out in the Treasury Regulations under section 183 generally are utilized in determining whether the requisite profit objectives are present under section 162, section 174, and other Internal Revenue Code sections. Sec. 1.183-2(b), Income Tax Regs. See also Cannon v. Commissioner, 949 F.2d 345, 347-351 (10th Cir. 1991), affg. T.C. Memo. 1990-148; Independent Elec. Supply, Inc. v. Commissioner, 781 F.2d 724, 726-727 (9th Cir. 1986), affg. Lahr v. Commissioner, T.C. Memo. 1984-472 (deductibility determined under secs. 162, 167, and 174); Brannen v. Commissioner, supra at 704 (deductibility

determined under sec. 183). Those factors, however, are not exclusive, and all of the unique and relevant factors and circumstances of the particular investments at issue are to be considered. Nickeson v. Commissioner, supra at 977.

Factors particularly relevant in cases involving new or undeveloped technology, and particularly relevant to our analysis of the profit objective issue in this case are the following: (1) Heavy promotion and marketing on the basis of projected tax benefits and inaccurate information regarding the EOR technology (see, e.g., Karr v. Commissioner, supra at 1023; Independent Elec. Supply, Inc. v. Commissioner, supra at 727); and (2) the financial structure of the fees and royalties that the partnerships agreed to

pay (see, e.g., Karr v. Commissioner, at 1024; Polakof v. Commissioner, 820 F.2d 321; 324 (9th Cir. 1987) affg. per curiam T.C. Memo. 1985-197).

Taking into account the factors set out in section 1.183(b)(2), Income Tax Regs., the factors emphasized above, and the extensive testimony of the key participants in these transactions and of the many other witnesses in this case, we conclude that the activities of Technology-1980 and of Barton were not engaged in with actual and honest profit objectives. The stated consideration agreed to by the partnerships for the license of EOR technology and for the lease of tar sands properties bore no relation to the value of that which was acquired, did not conform to industry norms, and precluded any realistic

opportunity for profit. Independent Elec. Supply, Inc. v. Commissioner, supra at 727-728; West v. Commissioner, 88 T.C. 152, 160-161 (1987).

In spite of the fact that a portion of the purported EOR technology licensed by the partnerships in this case might have reached some stage of development by the years in issue (and that additional EOR technology might in subsequent years be developed and become valuable), the estimates used by the partnerships for projected oil recovery from the use and application of the EOR technology licensed by the partnerships are not supported by credible expert testimony in this case and were not reasonable.

The use by petitioners' experts of projections of tar sands hydrocarbons or of oil in place, rather than projections

of oil reserves, and the failure to take sufficiently into account in their projections the undeveloped, untested status of the EOR technology significantly flaws the projections used by petitioners' experts. Tallal v. Commissioner, T.C. Memo. 1984-486, affd. 778 F.2d 275 (5th Cir. 1985). Projections based on oil reserves and realistic projected oil recovery therefrom using known and developed EOR technology would have provided a much more realistic basis on which to base the fees in question and a legitimate, acceptable business plan.

The economic projections of Technology-1980 and of Barton, upon which the investments allegedly were based, reflect a series of assumptions and conditions which were acknowledged to be

assumptions in the offering memoranda and other material. The validity and reasonableness of those assumptions, however, were never ascertained, nor was any meaningful or credible comment or opinion as to the validity and reasonableness of those assumptions set forth in the offering memoranda or other material.

The economic assumptions made in the partnerships' promotional material apparently did not even take into account or note the abnormal nature and high cost of the license fees and royalties, nor the significant costs of conducting tests and of establishing commercial operations using EOR technology.

Petitioners argue that the amount of the license fees due from Technology-1980 was not based on the number of

partnership units sold, as respondent contends and as we have found, but rather that the amount of the license fees was based on the total available barrels of oil in place projected to exist on the various properties and that there were to be 200,000 barrels of oil in place on the leased tar sands properties for each partnership unit sold. Petitioners may be correct that, in making initial calculations of the amount at which the technology license fees might be set, certain projections were made of the amount of hydrocarbon deposits or of the total barrels of oil in place on the properties leased by the partnerships and that those projections were used in estimating how much income conceivably might be earned by the partnerships. In actually structuring the license

agreements, however, the amount of the license fee that was agreed to was not made dependent upon the amount of hydrocarbons or of oil in place on the related properties, upon successful pilot tests, upon the amount of oil recovered, nor upon the income realized therefrom, thereby undermining and eliminating, on the facts of this case, any meaningful connection that the amount of the fees may originally have had to oil-in-place projections, or to projections of oil recovery.

With regard to the stated business plan of Technology-1980, petitioners' expert witnesses rely on many of the erroneous assumptions and projections reflected in the partnerships' offering memoranda. Their projections of cash flow are based on assumed production figures from the

Monroe, Louisiana, natural gas field as set forth in the offering memorandum. They make erroneous cost estimates in concluding that the royalties Technology-1980 reasonably would receive just from the natural gas production on the property leased from Glenda Petroleum would be sufficient to pay the entire license and royalty obligations due with regard to the EOR technology and the tar sands properties in Utah and Wyoming, and still produce a reasonable rate of return for the partnerships. Under the agreement between the Manhattan Partnerships and Glenda Petroleum, however, an excessive number of wells was to be drilled by Glenda in the Monroe, Louisiana, natural gas field, and the agreement did not reflect arm's-length terms. The projections of natural gas

production from the working interests in the Monroe, Louisiana, natural gas field were excessive.

One of petitioners' expert witnesses theorizes that it would take 10 years to bring the tar sands properties into commercial development using the ElektraFlo technology, at which point in time he speculates that the tar sands property interests of the partnerships would be sold to a major oil company for a sale price of at least $30 million. Another of petitioners' expert witnesses opines that the Barton business plan was a reasonable investment with a high income potential. He, however, bases his report on inappropriate assumptions as to the oil reserves on the property to be leased by Barton, production levels attributable to specific underdeveloped

EOR technology, and cash flows from joint ventures that did not yet exist.

We found the testimony of respondent's expert witnesses concerning the EOR technology and the structure and reasonableness of the license fees and royalties more credible. The fixed fees to be paid by the partnerships for the EOR technology licenses were not competitive in the oil industry and were contrary to industry norms. All but two of the technologies were undeveloped, untested processes for which no prudent investor would pay any substantial fixed fees, and the TEC and Carmel processes that were developed likely could have been licensed by the partnerships directly from the inventors thereof for running royalties based solely on income realized therefrom.

Petitioners' expert witness regarding the value of the EOR technology license agreement with Elektra did not opine on any specific or general dollar fair market value thereof. The expert witness admitted that the terms of the license agreement were unreasonable but justified in this case on the ground that the unreasonableness of the license agreement somehow could or should be overlooked because of the large amount of money the partnerships were assumed to make from the natural gas drilling program in the Monroe, Louisiana natural gas field. This assumption, among other assumptions, is made in spite of the fact that the original properties assigned to Technology-1980[6] were outside the

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[6]As amended pursuant to Order dated August 4, 1992.

producing area of the natural gas field and were only exploratory in nature and in spite of the fact that the terms of the drilling agreement with Glenda Petroleum were unfavorable to the partnerships and not at arm's length.

Petitioners did not offer an expert witness regarding the fair market value of the EOR technology licensed from Hemisphere, nor did petitioners offer an expert witness as to the reasonableness of the license agreement with Hemisphere. Rather, petitioners submitted the report of the National Institute of Petroleum Energy Research (NIPER) which merely summarizes NIPER's research with two types of EOR technology and the status generally of EOR technology in the early 1980s, and which provides very general estimates of the amount of oil that might

some day be recoverable by someone through the use of EOR technology.

The authors of the NIPER report understood little concerning the terms of the partnerships' license agreements with Elektra and Hemisphere, when the license agreements were entered into, and what technology was included. The NIPER report relies significantly on data from 1980, even though the continuing viability of that data in 1981 and certainly by 1982 was questionable.

Petitioners argue that the business plans of Barton and the other Wichita Partnerships were carefully developed and that the plans were unsuccessful only because of the unexpected decline-in world oil and gas prices. More specifically regarding Barton, petitioners argue that the amount of the

EOR license fees was based on the number of barrels of oil that were projected to be recovered using EOR technology from the particular properties in which the partnerships obtained working interests. For example, petitioners note that under Barton's EOR license agreement the properties to be acquired were to have not more than 100,000 barrels of oil resources in the ground per partnership unit. Inexplicably, using this maximum number of 100,000 barrels of oil, the promoters of Barton then assumed a 20-percent oil recovery rate using EOR technology, or a total of 20,000 barrels of oil per partnership unit, spread ratably over 10 years or 2,000 barrels of oil a year. The EOR license fee for the right to use the EOR technology acquired by each partnership unit was then set at

$2,000 each year or $1 a barrel of projected oil in the ground. Petitioners argue that the 20-percent recovery rate was based on expert opinions, that it was conservative and reasonable, and that $1 a barrel was "a bargain".

We disagree. The estimate of a 20-percent recovery rate using EOR technology that had not been tested in any significant manner on the particular partnership properties was grossly excessive. We believe that by making the license fees due from the partnerships a definite, fixed amount (that was due independently of any successful test of the technology in the properties and independently of any income or oil production from the properties using EOR technology), the license fees were not reasonable, nor realistic. The fixed,

definite nature of the license fees flies in the face of the many assumptions and risky, speculative projections on which the stated business plans of the partnerships were based.

If, as petitioners contend, the amount of the license fees related so directly to estimates of recoverable oil in the properties leased by the partnerships and to the utilization or projected utilization of the EOR technology on those properties (and not to the number of partnership units sold), why was accrual of the fees and the amount of the fees not made dependent upon successful pilot tests on the properties of the technology and on actual income realized therefrom or on incremental increased production of oil attributable to the EOR technology (as were the fees Elektra and

Hemisphere were to pay for the same technology and as were the license fees to be computed in connection with any sublicenses of the technology by Hemisphere or by the partnerships).

We reiterate that, with respect to the Wichita Partnerships, the properties in which the partnerships were to acquire working interests were not required to have "at least" 100,000 barrels of oil in the ground (which is the basis on which petitioners' argument and computations on this point seem to be made). Rather, the properties were required to have no more than, or not in excess of, 100,000 barrels of oil in the ground. Petitioners' argument and computations do not take into account the possibility that many of the working interests that the Wichita Partnerships might have

acquired under this provision could have had much less than 166,000 barrels of estimated oil in the ground and still would have been in compliance with the provisions of the partnership's business plan.

A significant additional flaw in the projections used by the promoters of both the Manhattan and Wichita Partnerships, in the analyses used by petitioners' expert witnesses, and in petitioners' arguments herein, is that world oil prices would continue increasing from 1979 and 1980 prices on a continuing upward spiral for the next 20 years.

With regard to price projections in the 1980 DOE report, we agree with and reiterate what has already been said:

> The 1980 Department of Energy Report was based on mid-1979 and earlier price

figures and was prepared during the world energy crisis of the late 1970's. That crisis was produced mainly by the Iranian Revolution and the related oil embargo. In a sense, the report presented a worst-case scenario as of the period when it was in preparation. The difference between the mid-1979 and the nominal dollar figures shown in the above table [set forth herein supra at page 5] demonstrates the rapidly escalating inflation rate during the late 1970's which, by 1981 and 1982, was already being dealt with by the Federal Reserve Board and other Government agencies. The report was neither used by, nor intended to be used by, businessmen as a basis for business decisions. [Ferrell v. Commissioner, 90 T.C. 1154, 1194-1195

(1988).]

In support of the value of the EOR technology licenses and the amount of the license fees and royalties, petitioners refer to a transaction in early 1981 by which the Manhattan Partnerships entered into a type of joint venture agreement with Pogo Producing Co., Inc. (Pogo), a publicly traded company, to conduct test drilling operations on the Burnt Hollow tar sands property. Pogo agreed to pay approximately $1.73 million in connection with test wells to be drilled on the Burnt Hollow property in return for a 5-percent undivided interest in the profits from the GEDCO heavy oil joint venture project on the Burnt Hollow property. No representative, however, of Pogo testified at trial, and we know too little about this transaction to give it

any credence in considering the value of the EOR technology licenses.

In support of their argument that the partnerships' investments were reasonable, petitioners also rely on certain testimony in this case regarding a number of other apparently large and risky investments in EOR technology by major oil producing companies, some of which apparently involved fixed fees. Such testimony, however, was of a very general nature, was largely given by individuals who were not personally or sufficiently involved with the investments, and does little to bolster the credibility or economic substance of the tax-oriented limited partnership investments at issue in this case.

Petitioners argue that even though no existing, traditional technology had been

tested successfully on the Utah and Wyoming tar sands properties,the "portfolio" of EOR technology licensed by Barton and the Wichita Partnerships constituted just the type of unusual, creative combination of EOR technology that might prove valuable on such property. As we have found, however, that portfolio consisted of a package of vague, largely untested ideas, that, if and to the extent ever developed, would likely be available generally in the market place and on much more favorable terms than from the partnerships. We reject petitioners' argument that the portfolio of EOR technology obtained by the partnerships represented anything of any substantial value. The EOR technology license agreements entered into by Technology-1980 with Elektra and

by Barton with Hemisphere were essentially valueless.

The multi-million dollar license fees and royalties that Technology-1980 and that Barton (and the other Manhattan and Wichita Partnerships) agreed to pay were excessive. They did not reflect arm's-length obligations, and they are not to be recognized as legitimate obligations of the partnerships. The debt obligations of the partnerships associated therewith did not constitute genuine debt obligations and are to be disregarded. Estate of Franklin v. Commissioner, 544 F.2d 1045 (9th Cir. 1976), affg. on different grounds 64 T.C. 752 (1975); Hulter v. Commissioner, 91 T.C. 371, 390 (1988).

In summary, presented to us in this case is a chain or multi-layered series

of obligations, stacked or multiplied on top of each other via the numerous partnerships to produce debt obligations in staggering dollar amounts, using a largely undeveloped and untested product, in a highly risky, very speculative, and non arm's-length manner in an attempt to generate significant tax deductions for investors. The transactions did not, and do not, constitute legitimate for-profit business transactions.

Losses of the partnerships are disallowed under section 183, and accrued interest deductions are disallowed due to the nongenuine nature of the underlying debt obligations.

As an alternative argument, petitioners contend that $1,800 of the per unit annual EOR license fees agreed to by the Wichita Partnerships should be treated,

under section 174, as deductible research or experimental expenditures. The apparent basis for this argument is that a portion of the license fees was used by Hemisphere to pay for research on EOR technology that, if successful, would accrue to the benefit of the partnerships.

We reject petitioners' argument. We note that no portion of the license fees was paid by the partnerships as research or experimental expenses, and we reject petitioners' attempt now to recharacterize the license fees and to qualify the fees as research or experimental expenses.

Further, although the regulations under section 174 do provide that costs incurred by taxpayers to hire others to conduct research that relates to the

taxpayers' businesses may be deductible as research or experimental expenditures, see sec. 1.174-2(a), Income Tax Regs., case law makes it clear that where taxpayers are merely passive investors with regard to the research, amounts paid to others with regard to the research do not qualify for a deduction under section 174. See Nickeson v. Commissioner, 962 F.2d 973 (10th Cir. 1992); Zink v. United States, 929 F.2d 1015, 1021 (5th Cir. 1991); Diamond v. Commissioner, 92 T.C. 423 (1989), affd. 930 F.2d 372, 376 (4th Cir. 1991); Levin v. Commissioner, 87 T.C. 698, 725-726 (1986), affd. 832 F.2d 403, 406 (7th Cir. 1987).

Under the above authority, even if a portion of the license fees were allowed to be recharacterized as research or experimental expenses, Hemisphere was to

conduct the research totally independently of the Wichita Partnerships. The partnerships were not in the business of conducting research on EOR technology, and no portion of the EOR license fees would qualify for a deduction under section 174.

We also note that under section 174(a)(2), to currently deduct research or experimental expenditures, such expenditures must be identified on the tax return representing the first taxable year for which such expenses are incurred or consent to make an election to currently deduct the expenditures must be obtained from the Secretary.

For the first time in their reply brief, petitioners argue summarily that a portion of the license fees that Barton paid to Hemisphere in connection with the

redistribution or sublicensing rights of Barton with regard to the EOR technology should be deductible under section 1253 as franchise fees. This is a new issue and will not be considered. Rule 41(a); Russo v. Commissioner, 98 T.C. 28, 31 (1992); DiLeo v. Commissioner, 96 T.C. 858, 891 (1991), affd. 959 F.2d 16 (2d Cir. 1992).

In light of our resolution of the above issues, it is not necessary to address certain other substantive issues raised by the parties.

Additions to Tax and Increased Interest

For the years before us, sections 6653(a) and 6653(a)(1) provide additions to tax equal to 5 percent of the underpayments if any part of the underpayments are due to negligence or

intentional disregard of rules and regulations. Section 6653(a)(2) provides an addition of 50 percent of the interest on the portion of the underpayment attributable to negligence. Negligence under sections 6653(a), 6653(a)(1) and (2) is the failure to exercise due care or the failure to do what a reasonable or ordinarily prudent person would do under the circumstances. Zmuda v. Commissioner, 731 F.2d 1417, 1422 (9th Cir. 1984), affg. 79 T.C. 714 (1982); Neely v. Commissioner, 85 T.C. 934, 947 (1985).

With regard to our analysis of the additions to tax in this case, it is important to note that one of respondent's own expert witnesses acknowledges that investors may have been significantly and reasonably influenced

by the energy price hysteria that existed in the late 1970s and early 1980s to invest in EOR technology. We have noted in our findings of fact a number of industry and governmental reports and publications that encouraged investors to invest in EOR technology. Various governmental incentives, funding, and subsidies were directed at development of EOR technology. In the early 1980s, a large amount of money was spent on the development of technology for the recovery of oil from shale and synthetic fuels in spite of the fact that such technology was not technically viable at the time and that minimal oil was produced therefrom.

In evaluating the imposition of the additions to tax in this case, and in light of the above facts (encouraging

investments in and the development of tertiary oil recovery methods such as EOR technology), we are somewhat understanding of the individual investments that were made in the Manhattan and Wichita Partnerships. In the context of the hysteria relating to the energy crisis the oil price increases of the late 1970s, the industry and governmental interest in EOR technology, the heavy and sophisticated promotion of these investments, and the evidence in these cases (and in spite of our findings and conclusions sustaining respondent's substantive tax adjustments), we conclude that petitioners are not liable for the additions to tax and the additional interest element for negligence under sections 6653(a), 6653(a)(1) and (2).

For 1982 and 1983, section 6659

provides for an addition to tax for underpayments of tax attributable to valuation overstatements. Valuation overstatements exist if the value or adjusted basis of property claimed on tax returns equals or exceeds 150 percent of the correct amount of the value or basis of the property. To the extent taxpayers claim tax benefits that are disallowed on grounds separately and independently from alleged valuation overstatements, the resulting underpayments of tax are not regarded as attributable to valuation overstatements. Todd v. Commissioner, 89 T.C. 912 (1987), affd. 862 F.2d 540 (5th Cir. 1988).

In these cases, we have disallowed the claimed losses of the partnerships on the ground that the activities of the partnerships lacked actual and honest

profit objectives. Although our conclusion was influenced by excessive license fees and royalties charged to the partnerships, our conclusion was not tied directly or indirectly to any specific overstatements of value per se that appeared on petitioners' tax returns. Accordingly, section 6659 additions to tax would appear inappropriate. See Rybak v. Commissioner, 91 T.C. 524, 566-567 (1988); Harness v. Commissioner, T.C. Memo. 1991-321.

Further, section 6659(e) authorizes respondent to waive all or part of additions to tax for valuation overstatements if taxpayers establish that there was a reasonable basis for the adjusted bases or valuations claimed on the returns and that such claims were made in good faith. Respondent's refusal

to waive section 6659 additions to tax is reviewable by this Court for abuse of discretion. See Brand v. Commissioner, T.C. Memo. 1988-194. In these cases, on the record before us, and in our discretion, we conclude and hold that respondent's refusal to waive the section 6659 additions to tax constitutes an abuse of discretion.

For 1982 and 1983, respondent asserts that petitioners are liable for additions to tax for substantial understatements of tax under section 6661, equal to 10 percent of their respective underpayments of tax attributable to such understatements of tax.[7] In order for

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[7]As originally enacted by the Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. 97-248, sec. 323(a), 96 Stat. 324, 613, the amount of the addition to tax under sec. 6661(a) was 10 percent of the underpayment of tax attributable to the substantial understatement. The

understatements of tax to be considered substantial, the amounts of the understatements must exceed the greater of 10 percent of the taxes required to be shown on the Federal income tax returns or $5,000. Sec. 6661(b)(1)(A). Respondent contends that the additions under section 6661 should be imposed in

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amount of the addition was increased to 25 percent of such underpayment by the Omnibus Budget Reconciliation Act of 1986, Pub. L. 99-509, sec. 8002(a)., 100 Stat. 1874, 1951. The amendment made by Pub L. 99-509, sec. 8002(a), increasing the rate of sec. 6661 addition to 25 percent, applies to all additions assessed after the date of enactment of Pub. L. 99-509. Pallottini v. Commissioner, 90 T.C. 498 (1988). Respondent has in an Amendment to Answer increased the sec. 6661(a) additions to tax to 25 percent above the 10 percent amount set forth in the notice of deficiency issued to but respondent has not sought to increase the sec. 6661(a) additions to tax above the 10 percent amount set forth in the amendment to answer with respect to Krause.

these cases because there was no substantial authority supporting the claimed treatment of the disallowed items. Petitioners argue that even if they are otherwise determined to be liable for the section 6661 additions to tax, respondent should have waived the additions.

Based on the record in these cases and many of the factors set forth above, we conclude that respondent's refusal to waive the section 6661 additions to tax constitutes an abuse of discretion. Mailman v. Commissioner, 91 T.C. 1079 (1988).

Section 6621(c), and its predecessor section 6621(d), provided an increased rate of interest for substantial underpayments attributable to tax-motivated transactions. Substantial

underpayments are defined as underpayments in excess of $1,000. By regulation, among the types of transactions that are considered to be tax-motivated transactions within the meaning of section 6621(c) are those with respect to which the related tax deductions are disallowed under section 183 for lack of profit objective. Sec. 301.6621-2T, A-4(1), Temporary Proced. & Admin. Regs., 49 Fed. Reg. 59394 (Dec. 28, 1984); Rybak v. Commissioner, 91 T.C. 524, 568 (1988). In light of our findings as to the lack of profit objective, petitioners are liable for increased interest under section 6621(c). Decisions will be entered under Rule 155.

TABLE ONE

Petitioners at Docket No. 33231-86

Dorothy A. Hildebrand Wahl

		Increased Interest and Additions to Tax			
Year	Deficiency	Sec. 6621(c)	Sec. 6653(a)	Sec. 6653(a)(1)	Sec. 6653(a)(2)
1980	$39,359	*	$1,968	--	--
1981	$49,027	*	--	$2,464	**

R. A. Hildebrand

		Increased Interest and Additions to Tax				
Year	Deficiency	Sec. 6621(c)	Sec. 6653(a)(1)	Sec. 6653(a)(2)	Sec. 6659	Sec. 6661
1982	$71,463	*	$3,573	**	$15,731	$1,903

* 120 percent of the interest accruing after Dec. 31, 1984, on the portion of the underpayment attributable to a tax-motivated transaction.

** 50 percent of the interest due on the portion of the underpayment attributable to negligence.

TABLE TWO

In Constant 1979 Dollars ($/bbl)

	1980	1885	1990	1995
Low price	32.66	32	32	32
Midprice	32.66	37	41	50
High price	32.66	43	49	70

In Project Inflated Dollars ($/bbl)

	1980	1885	1990	1995
Low price	37.24	53	77	106
Midprice	37.24	61	98	165
High price	37.24	71	117	231

TABLE THREE

Item	Parnerships' Percentage	Glenda Petroleum's Percentage	Retained Royalty Owners' Percentage
Production Revenues	65.625	9.375	25.000
Drilling Costs	100.000	None	None
Operating Costs	87.500	12.500	None
Compression & Gas Gathering Costs	87.500	12.500	None
Maintenance	87.500	12.500	None

TABLE FOUR

Year	Cash Investment	Estimated Tax Losses	Losses as a Percent of Cash Invested
1980	$10,000	$40,000	400%
1981	10,000	40,000	400%
1082	10,000	40,000	400%
1983	0	30,000	--
Totals	$30,000	$150,000	500%

TABLE FIVE

Notes to Be Issued In	Cash Due Per Unit	Face Amount of Notes Per Unit	Notes' Maturity Dates
1982	$1,100	$7,400	Sept. 30. 1997
1983	1,100	7,400	Sept. 30. 1997
1984	95	8,405	Sept. 30. 1997
1985	95	8,405	Sept. 30. 1997
1986	95	8,405	Sept. 30. 1997
Totals	$2,485	$40,015	

TABLE SIX

Date	Assignor	Assignee	Stated Consideration
9/3/79	Heim	Elektra	Not specified
9/25/79	Heim	Mardyn, N.V.	Not in the record
10/1/79	Gehrig	Heim	$170,000
10/5/79	Heim	Elektra	Not in the record
11/1/79	Heim	Shalelectric, S.A.	Not specified
11/1/79	Shalelectric, S.A.	Mardyn, N.V.	$10 million
11/1/79	Mardyn, N.V.	Elektra	Contingent

TABLE SEVEN

Date	Assignor	Assignee	Stated Consideration
11/1/81	Helm	Shalelectric, S.A.	--
11/1/81	Shalelectric, S.A.	Columbus Valley	$10 million
11/1/81	Columbus Valley	Hemisphere	Contingent

TABLE EIGHT

	1980	1981	1982	1983	1984
Gross Receipts/Sales	$0	$7,178	$62,557	$68,156	$119,677
Interest Income	8,260	285,814	104,419	43,576	36,150
License Fees	(7,402,500)	(7,402,500)	(7,402,500)	(7,402,500)	(7,402,500)
Royalties	(1,057,500)	(1,057,500)	(1,057,500)	(951,750)	(951,750)
Interest Expenses	(76,200)	(969,086)	(1,904,558)	(2,825,644)	(3,749,666)
Total Losses	($8,527,940)	($9,136,094)	($10,197,582)	($11,068,162)	($11,948,089)

TABLE NINE

	1982	1983
Gross Receipts/Sales		
Expenses		
Hemisphere License Fees	($493,425)	($414,567)
Loss from Joint Venture	($4,703)	
Other Deductions	($7,024)	($40,979)
Loss from Sale/Exchange of Property		($17,831)
Interest Expenses		($48,329)
Total Adjusted Losses	($505,152)	($521,706)
Less: Interest Income		$4,862
Income from Joint Venture		$16,503
Total Net Losses	($505,152)	($500,341)

R. A. HILDEBRAND and DOROTHY A HILDEBRAND WAHL, Petitioners-Appellants, v. COMMISSIONER OF INTERNAL REVENUE, Respondent-Appellee.

GARY E. KRAUSE, Tax Matters Partner, Barton Enhanced Oil Production Income Fund, Petitioner-Appellant, v. COMMISSIONER OF INTERNAL REVENUE, Respondent-Appellee.

No. 93-9010, No. 93-9011

UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT

28 F. 3d 1024; 1994 U.S. App. LEXIS 15501; 94-2 U.S. Tax Cas. (CCH) ¶ 50,305

June 22, 1994

Appeals from the United States Tax Court. (Tax Court Nos. 33231-86 & 16425-86).

COUNSEL: Michael R. Matthias (Jeffrey P. Berg and Stuart R. Singer, of Matthias & Berg, Los Angeles, California, with him on the briefs), of Matthias & Berg, Los Angeles, California, for the Petitioners-Appellants R.A. Hildebrand and Dorothy A. Hildebrand Wahl.

Kenneth M. Barish, of Reish & Luftman, Los Angeles, California, for the Petitioner-Appellant Gary E. Krause, Tax Matters Partner, Barton Enhanced Oil Production Income Fund.

Kenneth W. Rosenberg (Loretta C. Argrett, Assistant Attorney General, and Richard Farber, Attorney, Tax Division,

Department of Justice, Washington, D.C., with him on the brief), Attorney, Tax Division, Department of Justice, Washington, D.C., for the Respondent-Appellee.

JUDGES: Before TACHA and BRORBY, Circuit Judges, and BROWN,* District Judge.

* The Honorable Wesley E. Brown, Senior District Judge, United States District Court for the District of Kansas, sitting by designation.

TACHA, Circuit Judge.

The taxpayers in these consolidated cases, R.A. Hildebrand and Dorothy A. Hildebrand Wahl (the "Hildebrands") and

Gary E. Krause ("Krause"), tax matters partner of Barton Enhanced Oil Production Income Fund ("Barton Income Fund"), appeal the Tax Court's disallowance under 26 U.S.C. § 183 [8] of deductions for losses resulting from investments in limited partnerships and the disallowance of 26 U.S.C. § 163 interest deductions. The taxpayers also appeal the Tax Court's imposition of an increased interest rate on the tax underpayment attributable to tax-motivated transactions under 26 U.S.C. §§ 6601 and 6621(c). Finally, Barton Income Fund alleges the Tax Court erred in rendering a consolidated opinion grouping Barton with the Hildebrands and in finding that certain license fee obligations incurred by Barton were not

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[8]All citations to Internal Revenue Code sections are to code sections in force during the tax years in question.

deductible under 26 U.S.C. § 174 as research and development expenditures or under 26 U.S.C. § 1253 as franchise fees.

I. BACKGROUND

The facts in this case are fully set forth in the Tax Court opinion, Krause v. Commissioner, 99 T.C. 132 (1992). We offer only a brief procedural summary for purposes of this appeal.

On their federal income tax returns the Hildebrands claimed losses resulting from their investment as limited partners in Technology Oil and Gas Associates 1980 ("Technology-1980"). The Commissioner of the Internal Revenue Service ("Commissioner") disallowed these losses and the Hildebrands petitioned the Tax

Court for redetermination of resulting deficiencies in tax and additions to tax. The Commissioner issued Barton Income Fund a notice of final partnership administrative adjustment disallowing losses and amounts claimed as eligible for tax credits. Krause petitioned the Tax Court for redetermination of the adjustments. The Tax Court consolidated these cases for trial treating them as test cases for a number of related cases involving tax deductions by limited partnerships.

After a fifteen-week trial the Tax Court issued an opinion upholding substantially all of the Commissioner's determinations. The Tax Court disallowed under 26 U.S.C. § 183 the taxpayers' deductions for losses resulting from

investments in the limited partnerships because the partnerships did not have the requisite profit motive and imposed an increased interest rate on tax underpayment attributable to tax-motivated transactions under 26 U.S.C. §§ 6601 and 6621(c). The Tax Court also disallowed under 26 U.S.C. § 163 interest deductions because the partnerships' underlying debt obligations were not genuine. The taxpayers now appeal.

This court has jurisdiction to review the Tax Court's decision pursuant to 26 U.S.C. § 7482(a). We affirm.

II. DISCUSSION

Whether Technology-1980 and Barton Income Fund had actual and honest profit objectives is a question of fact. Cannon v. Commissioner, 949 F.2d 345, 349 (10th Cir. 1991), cert. denied, 120 L. Ed. 2d 901, 112 S. Ct. 3030 (1992). "The applicable standard of review is a stringent one: a finding of fact should not be disturbed unless it is clearly erroneous." Id. (citing Fed. R. Civ. P. 52(a)). "A finding is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with a definite and firm conviction that a mistake has been committed." United States v. United States Gypsum Co., 333 U.S. 364, 395, 92 L. Ed. 746, 68 S. Ct. 525 (1948). "If the

district court's account of the evidence is plausible in light of the record viewed in its entirety, the court of appeals may not reverse it even though convinced that had it been sitting as the trier of fact, it would have weighed the evidence differently." Anderson v. Bessemer City, 470 U.S. 564, 573-74, 84 L. Ed. 2d 518, 105 S. Ct. 1504 (1985). After carefully examining the pertinent parts of the record, we conclude that the Tax Court's finding that no actual and honest profit objective was present in either limited partnership is plausible and not clearly erroneous.

The Tax Court applied the proper test in determining whether the activities in question were "engaged in for profit" under 26 U.S.C. § 183(a). All expenses associated with a business transaction

are not necessarily deductible. For a deduction to be allowed it must be shown that the activity engaged in was operated with an actual and honest profit objective. 26 U.S.C. § 183. We look to the economic motive of the partnership, not the individual investor, to determine whether the activity is engaged in for profit. Cannon, 949 F.2d at 349.

The taxpayer has the burden to prove the requisite profit objective. Id. at 350. "The test is whether profit was the dominant or primary objective of the venture." Id. The regulations set forth nine nonexclusive factors to be examined under § 183 in determining whether a taxpayer engages in activities with the objective of realizing a profit:

(1) the extent to which the taxpayer carries on the activity in a businesslike

manner; (2) the taxpayer's expertise or his reliance on the advice of experts; (3) the time and effort the taxpayer expends in carrying on the activity; (4) the expectation that the assets used in the activity may appreciate in value; (5) the taxpayer's success in similar activities; (6) the taxpayer's history of income or loss in the activity; (7) the amount of occasional profits, if any; (8) the taxpayer's financial status; and (9) the elements of personal pleasure or recreation. Cannon, 949 F.2d at 350; see Treas. Reg. § 1.183-2(b). The regulation directs:

In determining whether an activity is engaged in for profit, all facts and circumstances with respect to the activity are to be taken into account. No one factor is determinative in making

this determination. In addition, it is not intended that only the factors described in this paragraph [listed above] are to be taken into account in making the determination, or that a determination is to be made on the basis that the number of factors . . . indicating a lack of profit objective exceeds the number of factors indicating a profit objective, or vice versa. Treas. Reg. § 1.183-2(b).

The Tax Court applied the relevant factors and concluded that the Technology-1980 and Barton Income Fund partnerships were not motivated by profit on the following bases: (1) the amounts the partnerships agreed to pay for the licenses for the Enhanced Oil Recovery (EOR) technology and for the lease by Technology-1980 for tar sands properties

"bore no relation to the value of that which was acquired, did not conform to industry norms, and precluded any realistic opportunity for profit;" (2) the partnerships' estimates of oil to be recovered through EOR technology are "not supported by credible expert testimony. . . and were not reasonable" based on the undeveloped and untested status of the EOR technology; (3) the partnerships' economic projections in their offering materials reflect a series of assumptions which were not substantiated and did not account for the abnormal practice and high cost of the license fees and royalties or the significant cost of establishing commercial operations; (4) all but two of the EOR technologies licensed by the partnerships were "undeveloped, untested processes for

which no prudent investor would pay any substantial fixed fees" and the other two technologies could have been licensed based solely on the income realized therefrom; (5) the partnerships relied on unrealistic projections that "world oil prices would continue increasing from 1979 and 1980 prices on a continuing upward spiral for the next 20 years;" (6) the licensing agreements for the EOR technologies were not completed through arms-length negotiations; and (7) the partnerships marketed the investments in part on the basis of projected tax benefits and inaccurate information regarding the EOR technology. Additionally, the tax court noted that the partnerships had a record of substantial losses and never recorded a profit in any year of their ventures,

another factor relevant to the "profit motive" inquiry. Cannon, 949 F.2d at 352 ("A record of such persistent and substantial losses is persuasive evidence that the partnerships did not possess the requisite profit motive."); see also Treas. Reg. § 1.183-2(b)(6).

Taxpayers point to the court's determination that the partnerships' reliance on the energy price projections was unreasonable and its determination that partnership management lacked expertise in the oil and gas business as the most substantial basis for challenging the Tax Court's finding that the partnerships did not have the requisite profit motive. The taxpayers also assert error in the court's treatment of the up-front, fixed licensing fees for the EOR technology.

The Hildebrands point to a joint venture agreement with an independent third party to perform test drilling on the tar sands property in return for an interest in the partnership as independent evidence of the value of the EOR technology agreements. The taxpayers argue further that, because other companies made large and risky investments in enterprises involving similar EOR technology at similar times, these investments are therefore validated.

After reviewing the record, however, we do not find the conclusions of the tax court to be clearly erroneous. The Tax Court did a thorough job of considering the profit motive issue. It applied the relevant factors, considered all the evidence and testimony presented and rested its determination on a solid

foundation. It also ably addressed the arguments made by the taxpayers outlined in the above paragraph.

Taxpayers next assert that the Tax Court erred in disallowing certain partnership interest deductions under 26 U.S.C. § 163. The Tax Court found that the debt obligations of the partnerships were not based on arms-length transactions, resulted from excessive amounts paid for the licenses of the EOR technology and otherwise did not represent genuine debt obligations and, therefore, should be disregarded. The Tax Court's findings in this regard are not clearly erroneous.

Taxpayers also appeal the imposition of an increased interest rate on the tax underpayment attributable to tax-motivated transactions under 26

U.S.C. §§ 6601 and 6621(c). Because we do not find clearly erroneous the Tax Court's determination that the requisite profit motive did not exist, we reject taxpayers' argument and affirm the Tax Court's imposition of the increased rate of interest for substantially the reasons stated in its opinion. We specifically reject Krause's assertion that the Tax Court erred in finding Barton Income Fund liable for an increased rate of interest because a transaction which is determined to lack a profit motive does not equal a tax-motivated transaction under section 6621. Section 6621(c)(1) imposes an increased rate of interest on "any substantial underpayment attributable to tax motivated transactions," which include activities not engaged in for profit. Wolf v. Commissioner, 4 F.3d 709,

715 (9th Cir. 1993).

Krause also argues that the Tax Court erred in rendering a consolidated opinion covering both Hildebrand and Barton Income Fund. We disagree. After our own study of the record we conclude that the minor errors in the Tax Court opinion confusing facts applying only to Hildebrand with facts surrounding Barton Income Fund were insignificant and did not affect the substance or the legal conclusions in the Tax Court's opinion.

Krause also asserts that the Tax Court erred in disallowing portions of its licensing fees as research and development expenses under 26 U.S.C. § 174. We disagree. The Tax Court's finding that Barton Income Fund had no profit objective precludes it from taking deductions under § 174. Independent Elec.

Supply, 781 F.2d 724, 726 (10th Cir. 1986); Agro Science Co. v. Commissioner, 934 F.2d 573, 576 (5th Cir.), cert. denied, 116 L. Ed. 2d 243, 112 S. Ct. 300 (1991).

III. CONCLUSION

We find no merit in taxpayers' remaining arguments and affirm the decision of the Tax Court for substantially the reasons stated in its opinion.

SECTIONS OF THE INTERNAL REVENUE CODE OF 1986

Sec. 161 ALLOWANCE OF DEDUCTIONS

In computing taxable income under section 63, there shall be allowed as deductions the items specified in this part, subject to the exceptions provided in part IX (sec. 261 and following, relating to items not deductible).

Sec. 162 TRADE OR BUSINESS EXPENSES,

(a) IN GENERAL.--

There shall be allowed as a deduction all the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business, including--

(1) a reasonable allowance for salaries or other compensation for personal

services actually rendered;

(2) traveling expenses (including amounts expended for meals and lodging other than amounts which are lavish or extravagant under the circumstances) while away from home in the pursuit of a trade or business;

and

(3) rentals or other payments required to be made as a condition to the continued use or possession, for purposes of the trade or business, of property to which the taxpayer has not taken or is not taking title or in which he has no equity.

For purposes of the preceding sentence, the place of residence of a Member of Congress (including any Delegate and Resident Commissioner) within the State, Congressional district, or possession

which he represents in Congress shall be considered his home, but amounts expended by such Members within each taxable year for living expenses shall not be deductible for income tax purposes in excess of $3,000.

Sec. 163 INTEREST

(a) GENERAL RULE. There shall be allowed as a deduction all interest paid or accrued within the taxable year on indebtedness.

Sec. 165 LOSSES

(a) GENERAL RULE -- There shall be allowed as a deduction any loss sustained during the taxable year and not compensated for by insurance or otherwise.

Sec. 183 ACTIVITIES NOT ENGAGED IN FOR PROFIT

(a) GENERAL RULE.--

In the case of an activity engaged in by an individual or an S corporation, if such activity is not engaged in for profit, no deduction attributable to such activity shall be allowed under this chapter except as provided in this section.

(b) DEDUCTIONS ALLOWABLE.--

In the case of an activity not engaged in for profit to which subsection (a) applies, there shall be allowed--

(1) the deductions which would be allowable under this chapter for the taxable year without regard to whether or not such activity is engaged in for profit, and

(2) a deduction equal to the amount of the deductions which would be allowable under this chapter for the taxable year only if such activity were engaged in for profit, but only to the extent that the gross income derived from such activity for the taxable year exceeds the deductions allowable by reason of paragraph (1).

(c) For purposes of this section, the term "activity not engaged in for profit" means any activity other than one with respect to which deductions are allowable for the taxable year under section 162 or under paragraph (1) or (2) of section 212.

Sec. 211 ALLOWANCE OF DEDUCTIONS

In computing taxable income under section 63, there shall be allowed as

deductions the items specified in this part, subject to the exceptions provided in part IX (section 261 and following, relating to items not deductible).

Sec. 212 EXPENSES FOR PRODUCTION OF INCOME

In the case of an individual, there shall be allowed as a deduction all the ordinary and necessary expenses paid or incurred during the taxable year--

(1) for the production or collection of income;

(2) for the management, conservation, or maintenance of property held for the production of income; or

(3) in connection with the determination, collection, or refund of any tax.

SEC. 6621. DETERMINATION OF RATE OF INTEREST.

. . . . . .

(c) [As added by Tax Reform Act of 1984, Pub. L. No. 98369, 98 Stat. 494, § 144, effective for interest accruing after Dec. 31, 1984, and amended by Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085, §§ 1511(c)(1), 1535.] Interest on Substantial Underpayments Attributable to Tax Motivated Transactions.---

(1) In general.--In the case of interest payable under section 6601 with respect to any substantial underpayment attributable to tax motivated transactions, the annual rate of interest established under this section shall be 120 percent of the underpayment rate established under

this subsection.

(2) Substantial underpayment attributable to tax motivated transactions.--For purposes of this subsection, the term "substantial underpayment attributable to tax motivated transactions" means any underpayment of taxes imposed by subtitle A for any taxable year which is attributable to 1 or more tax motivated transactions if the amount of the underpayment for such year so attributable exceeds $1,000.

(3) Tax motivated transactions.--

(A) In general.--For purposes of this subsection, the term "tax motivated transaction" means--

(i) any valuation overstatement (within the meaning of section 6659(c)),

(ii) any loss disallowed by reason of section 465(a) and any credit disallowed under section 46(c)(8),

(iii) any straddle (as defined in section 1092(c) without regard to subsections (d) and (e) of section 1092),

(iv) any use of an accounting method specified in regulations prescribed by the Secretary as a use which may result in a substantial distortion of income for any period, and

(v) any sham or fraudulent transaction.

(B) Regulatory authority.--The Secretary may by regulations specify other types of transactions

which will be treated as tax motivated for purposes of this subsection and may by regulations provide that specified transactions being treated as tax motivated will no longer be so treated. In prescribing regulations under the preceding sentence, the Secretary shall take into account--

(i) the ratio of tax benefits to cash invested,

(ii) the methods of promoting the use of this type of transaction, and

(iii) other relevant considerations.

(C) Effective date for regulations.--Any regulations prescribed under subparagraph (A)(iv) or (B) shall apply only to

interest accruing after a date (specified in such regulations) which is after the date on which such regulations are prescribed.

(4) Jurisdiction of Tax Court.--In the case of any proceeding in the Tax Court for a redetermination of deficiency, the Tax Court shall also have jurisdiction to determine the portion (if any) of such deficiency which is a substantial underpayment attributable to tax motivated transactions.